DEPARTMENT OF THE NAVY
NAVAL AIR STATION OCEANA
1750 TOMCAT BOULEVARD
VIRGINIA BEACH, VIRGINIA 23460-2168

IN REPLY REFER TO:
NASOCEANAINST 8000.16
N05VB
AUG 18 2003

NAS OCEANA INSTRUCTION 8000.16

Subj: NAVAL AIR STATION OCEANA AVIATION ORDNANCE MANUAL

Ref: (a) U.S. Navy Regulations
(b) OPNAVINST 8000.16A
(c) NAVSEA OP 5, Volume I

1. Purpose. To provide general and specific information for the safe and efficient handling, transportation and stowage of ammunition and explosives.

2. Discussion. This instruction has been prepared per references (a) through (c). The regulations and safety precautions set forth herein do not change existing directives issued by higher authority, nor do they relieve cognizant personnel of their responsibility for the use of good judgment and observance of safety precautions.

3. Scope. This instruction is applicable to military and civilian personnel of Naval Air Station (NAS) Oceana, squadrons, detachments and temporary additional duty personnel whose duties require them to store, transport, handle or use ammunition, explosives or ordnance material on board NAS Oceana.

4. Action. The Commanding Officer is tasked with the administration and enforcement of the provisions of this instruction. Departments and tenant activities are invited to submit, in writing, proposed changes or comments concerning the contents of this instruction.

5. Forms. Ammunition Requisitioning/Issue/Return Document, LANTORD DET Oceana Form 8010/1 and all other forms prescribed in the text may be obtained through regular supply channels and Atlantic Ordnance Command Detachment.

T. KEELEY

Distribution:
NASOCEANAINST 5216.1X
List I and III

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RECORD OF CHANGES

1. Changes to this instruction shall be promulgated with identifying consecutive change numbers. Holders shall record below the change number and date, date of entry and signature, rank and organization of the person actually making each change.

CHANGE#	DATE OF CHANGE	ENTRY DATE	RANK AND NAME

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CHAPTER 1
RESPONSIBILITIES

SECTION 1
WEAPONS HANDLING AND SAFETY RESPONSIBILITIES

Ref: (a) NAVSEA OP 5, Volume I
(b) OPNAVINST 8020.14

The following responsibilities for maintaining safety at Navy facilities will be observed.

1-101. Commanding Officer. In addition to the duties and responsibilities inherent in the position of Commanding Officer as set forth in Navy Regulations, and as promulgated by higher authority, the Commanding Officer of a Navy activity is responsible for the safety of their command and training of assigned personnel. They will ensure that all ordnance-handling evolutions at their command (including assigned aviation units) are conducted safely and per references (a) and (b). They will also ensure the qualification and certification of personnel who perform or supervise any ordnance and/or explosive operation per existing directives.

1-102. Safety Department. The responsibilities of the Safety Department is to administer the Navy Occupational Safety and Health Program, the Explosive Safety Program, the Industrial Safety Program, Motor Vehicle Safety Program and other safety programs assigned. The Safety Director, as a staff advisor to the Commanding Officer for all safety matters, is responsible for implementing and managing the safety programs and will report their status directly to the Commanding Officer. An Explosives Safety Officer (ESO) is assigned to the Safety Department and is responsible for assuring compliance per reference (a).

1-103. Officer in Charge (OIC), Atlantic Ordnance Command Detachment (LANTORDCOM DET) Oceana. The OIC LANTORDCOM DET Oceana is responsible to the Commanding Officer, Atlantic Ordnance Command (AOC) for supervision and direction of the proper requisitioning, safe handling, stowage, assembly/ disassembly, delivery and issuance of all weapons. The OIC LANTORDCOM DET Oceana will ensure that ammunition magazines and lockers are properly maintained, and all personnel tasked to handle explosives are trained in proper and safe handling procedures pertaining to ordnance items they handle. The OIC LANTORDCOM DET Oceana will also coordinate with assigned aviation unit commanders or their representatives in determining the type, quantity and delivery times for ordnance required in support of the unit's assigned mission.

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CHAPTER 1
RESPONSIBILITIES

SECTION 2
EXPLOSIVE MISHAP REPORT

Ref: (a) OPNAVINST 5102.1C
(b) OPNAVINST 8000.16A

1-201. Explosive Mishaps. Conventional Ordnance Deficiency Reports (CODR), and Explosive Mishaps Reports (EMR) will be submitted to the applicable Cognizance Field Activity (CFA)/Fleet Support Team (FST) and processed per reference (a). Engineering Investigations Request (EIR) and Technical Publication Deficiency Reports (TPDR) will be submitted with the applicable CFA/FST and processed per references (a) and (b).

1-202. Reporting Responsibilities. The Weapons or Ordnance Officer within a tenant command is responsible for the administration of CODRs, EMRs EIRs and TPDRs as they relate to airborne weapons. In the absence of a Weapons/Ordnance Officer the cognizance department officer is responsible. LANTORDCOM DET Oceana (LANTORDCOM DET OCEANA VA//50//) and NAS Oceana Safety Department (NAS OCEANA//SAFETY//) will be addressed in all explosive related reports when mishaps occurs on board NAS Oceana.

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CHAPTER 2
AMMUNITION SUPPLY PROCEDURES

SECTION 1
AMMUNITION ACCOUNTABILITY AND MANAGEMENT

Ref: (a) OPNAVINST 8000.16A
(b) NAVSUP P-724
(c) SPCCINST 8010.12
(d) NAVAIR 11-1-116B

2-101. Transaction Reports. All ammunition transaction reports for materials under the control of LANTORDCOM DET Oceana will be prepared and released by the OIC LANTORDCOM DET Oceana or a designated representative.

2-102. Inventory. All ammunition and ammunition components in stock will be inventoried by the OIC or designated representative at least annually with a report of the results submitted to Commanding Officer, AOC. Ammunition and components designated in references (a) and (b) as Security Risk Category 1 will be inventoried quarterly. Geographical hosted items on sub-custody to squadrons will be inventoried monthly.

2-103. Expenditures. All supported activities are responsible for maintaining expenditures with their assigned fiscal year Non-Combat Expenditure Allocation (NCEA). Carrier Air Wings, Marine Air Groups, all assigned squadrons and transient activities submit daily expenditure reports to LANTORDCOM DET Oceana Ammunition Stock Control Office.

2-104. Policies, Procedures and Responsibilities. Policies, procedures and responsibilities for supply management of conventional ammunition promulgated in reference (c) will be strictly followed.

a. The OIC or designated representative will maintain stock records of all conventional ammunition in the custody of NAS Oceana via the Retail Ordnance Logistics Management System.

b. The OIC or designated representative will manage the Notice of Ammunition Reclassification (NAR) Program per reference (d). Additionally, other tenant commands and departments that process and use ordnance will maintain a NAR program.

c. Departments and tenant commands will be responsible for inventory accuracy of all ordnance items sub-custodied to them under the Geographical Hosting Program per LANORDCOM Memorandum of Agreement.

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CHAPTER 2
AMMUNITION SUPPLY PROCEDURES

SECTION 2
AMMUNITION ISSUE AND RECEIPT PROCEDURES

Ref: (a) LANTORDCOM DET Oceana Requisition Guide
(b) LANTORDCOM DET Oceana MOA
(c) NAVAIR 11-100-1.1 (CADPAD)

2-201. Signature List. Squadron Commanding Officers and applicable department heads will provide LANTORDCOM DET Oceana Ammunition Stock Control Office a quarterly specimen signature listing on command letterhead, of personnel who are authorized to sign for receipt of ammunition and components as per references (a) and (b). Chits that are not signed by an authorized representative will not be accepted by the issuing activity.

2-202. Requisitioning

a. Ammunition requisitions will be delivered to LANTORDCOM DET Oceana Ammunition Stock Control Office, Building 2005, during normal working hours and at least 72 hours prior (excluding weekends and holidays) to the required delivery date per references (a) and (b).

b. Ammunition requiring assembly will be issued as an all-up-round in the configuration specified in the requisition and per applicable weapons assembly manuals. Requisitions must include all required components.

c. All-up-rounds will be issued on appropriate transport trailer.

d. Ammunition, other than all-up-rounds, will be issued/received in the original shipping container or an approved ammunition shipping container. Do not make any marks on the original container.

2-203. Request Controls. The following guidance will be utilized in controlling ammunition requests:

a. Ammunition issues will be restricted to one day's requirement unless authorized by OIC LANTORDCOM DET Oceana.

b. Chaff, decoy flares and associated impulse cartridges are prohibited outside the confines of the assembly area, Building 2020, unless properly and safely loaded inside the dispenser unit or approved shipping container.

c. Inert bombs, signal cartridges and rack/launcher associated CAD requisitions are limited to a maximum on-hand quantity of one week's requirements.

d. Rockets, guided missiles other than captive-carry, high explosive munitions, parachute flare and marine marker requisitions are limited to a maximum on-hand of one day's requirements. All unexpended ordnance will be returned to LANTORDCOM DET Oceana at the end of the ordnance evolution or the day's flight operations, whichever occurs first.

2-204. Aircrew Escape Propulsion System Requisitioning. Aircrew Escape Propulsion System (AEPS) device requisitioning policy is described in reference (c). Because they are manufactured in limited quantities and are not standard stock items, AEPS requisitions will be processed as follows:

a. Submit a request for required item(s) via the https://cadpad.ih.navy.mil website.

b. While based ashore, and when directed by Commander, Naval Air Force, U.S. Atlantic Fleet, operating units may be authorized early replacement of AEPS that will expire during deployment. When requisitioned for this purpose, the statement "for pre-deployment replacement will be entered in the "remarks" section of reference (a).

c. Requisitions for replacing damaged or corroded AEPS and Cartridge Actuating Device (CADS) must cite the applicable EMR, CODR or Quality Deficiency Report (QDR) serial number and the date time group of the message report.

d. Requisitions for AEPS must reflect only the actual replacement quantity.

2-205. Requisitioning Step-By-Step Procedures. To requisition and receive ammunition from LANTORDCOM DET Oceana, operating units will complete the Ordnance Requisition Form as follows:

a. Enter the document identifier in Block 1. This identifies the purpose and use of the document being submitted. For ammunition requisition, use "AOA."

b. Enter the routing identifier in Block 2. For ammunition requisitions, use "POZ."

c. Enter the document number in Block 3. This number consists of four elements: A service code, unit identification code, Julian Date and serial number.

NOTE: The serial number will be entered in Block 12. Example: V09084/3100/OO01.

d. Enter the fund code in Block 4. This identifies the expense element and allotment to which requisitioned material will be charged. For ammunition requisitions, use "Y6."

e. Enter the distribution and cognizance codes in Block 5. The distribution code designates activities eligible to receive additional status, followed by the cognizance code, which identifies the item manager. Example: N/2E.

f. Enter the project code in Block 6. This identifies the purpose for which the ammunition was requisitioned. Example: 876-TRAINING.

g. Enter the required delivery date in Block 7.

h. Enter the preferred delivery time in Block 8.

NOTE: At least 72 working hours prior to requested date.

i. Enter the nomenclature of the items being requisitioned on Block 10.

j. Enter the quantity in Block 11.

NOTE: The quantity requested must not exceed the authorized NCEA.

k. Enter a four-digit serial number for each item requested in Block 12. The unit's Supply Department must authorize this serial number for use. Enter the four digit Navy Ammunition Logistics Code (NALC) and the nine digit National Item Identification Number (NIIN) in block 4. Example: A688/ 012139656

l. Enter any special instructions or amplification data in Block 24. Example: Flare settings, FUSE settings, number of rockets per pod, a special delivery place, bureau number, CODR/EMR serial numbers, etc.

m. Upon completion of Blocks 1-8, 11-12, 14 and 24, the authorizing official will conduct a quality review of the entire document. Following this review, they will enter their printed name and signature in Block 9.

n. The completed document will be submitted to LANTORDCOM DET Oceana's Inventory Accuracy Officer where it will undergo a second quality review. Following this review, an Ammunition Accounting Squadron representative will enter a receipt signature and date in block 18.

o. Prior to accepting any ammunition, it is imperative operating unit personnel ensure that each unique item is validated against the requisition document for accuracy. Check the item nomenclature, serial number, lot number, NALC/NIIN and quantity for each item listed. Upon completion, operating unit personnel will enter a "received by" signature in block 20.

2-206. Expenditure. To report the expenditure of ammunition, operating units will submit a LANTORDCOM DET Oceana Form 8024.1 as follows:

NOTE: Expenditure reports must be submitted to LANTORDCOM DET Oceana Ammunition Stock Control office by 0900 the following workday of actual expenditure. Fax number 433-2490.

NOTE: Negative responses are required for days that no ordnance is expended.

a. Make copies of the original document. Submit expenditure data on the copy only.

b. Enter the expended quantity.

c. Enter the unexpended balance.

CHAPTER 2
AMMUNITION SUPPLY PROCEDURES

SECTION 3
AMMUNITION RETURNS

Ref: (a) LANTORDCOM DET Oceana Requisition Guide
(b) LANTORDCOM DET Oceana MOA

2-301. Ammunition/Ordnance Returns. References (a) and (b) provide detailed guidelines for returning ammunition, ammunition containers and steel pallets. Abbreviated procedures are as follows:

a. All ammunition returned to LANTORDCOM DET Oceana will be accompanied by a properly completed DD Form 1348-1A.

b. Unserviceable or repairable "H" or "F" condition coded AEPS/CADS must be accompanied by a DD From 1348-1A.

c. With the exception of pre-assembled ordnance, all ammunition, explosives and components will be packaged properly and returned in the prescribed shipping container, if available, with lot number, national stock number, NALC, MK/MOD, open date and condition code clearly marked. LANTORDCOM DET Oceana Magazine Department will provide shipping containers when the original shipping container is not available.

NOTE: Shipping containers and documentation must reflect the correct quantity, national stock number, NALC, MK MOD, nomenclature, lot number(s), serial number(s) and condition code.

d. All ammunition containers, including wooden boxes, are reusable and will be returned to LANTORDCOM DET Oceana Magazine Department when empty. Each container must be certified empty by visually inspecting to ensure it is clear of any live ammunition, sealed and a properly authenticated MIL-STD-129 tag affixed to the container.

e. When ammunition or ordnance is being taken off station for a detachment or deployment, it must have a completed DD Form 1348-1A from LANTORDCOM DET Oceana Ammunition Stock Control office. The DD Form 1348-1A will be submitted to the activity destination. This will ensure proper accounting/tracking of ammunition items.

f. Squadrons returning ammunition, explosives and components from detachments/deployments will furnish LANTORDCOM DET Oceana with DD Form 1348-1A, from the detachment/deployment Ammunition Accounting Department and annotated "gain by fleet return."

g. If the material condition of the ordnance item is unknown, the material should be returned in condition code "K" (serviceable/condition unknown) pending verification of the actual condition code

h. If ammunition is to be returned to LANTORDCOM DET Oceana after 1530, Monday through Friday, on weekends or holidays, LANTORDCOM DET Oceana duty section personnel will be notified at 433-2352.

2-302. Return Step-by-Step Procedures. To return ammunition, operating units will complete DD Form 1348-1A as follows:

a. Prior to returning any ammunition, operating unit personnel will validate each item for accuracy against the original document. Check the item nomenclature, serial number(s), lot number(s), NALC/NIIN and return quantity indicated in block 16. Upon completion, operating unit personnel will enter a "returned by" signature in block 22.

b. Return all unexpended ammunition to LANTORDCOM DET Oceana magazine department.

c. Prior to returning any ammunition, LANTORDCOM DET Oceana magazine department personnel will validate each item for accuracy against the DD Form 1348-1A. Upon completion, Magazine Department personnel will enter a receipt signature in Block 22.

d. Completed documents will be forwarded to the LANTORDCOM DET Oceana, Ammunition Stock Control Office without delay.

2-303. Reclassification. To return ammunition that requires reclassification, the following procedures apply:

a. Present date time group or a copy of outgoing CODR.

b. Complete DD Form 1348-1A for each unique NALC/NIIN with the correct condition code.

2-304. Temporary Stowage. Any ammunition that is to be temporarily stowed, must be accompanied by DD Form 1348-1A. The temporary storage period cannot exceed 30 days. Any item temporarily stowed for more than 30 days will be returned to stock. When verification of the documentation is completed, the documentation must be promptly submitted to the LANTORDCOM DET Oceana, Ammunition Stock Control Office. Additionally, commands which place items into temporary stow are required to maintain NAR applicability for their items.

CHAPTER 3
ARMORY STANDARD OPERATING PROCEDURES

SECTION 1
RESPONSIBILITIES/OPERATIONS

Ref: (a) OPNAVINST 3591.1C
(b) OPNAVINST 5530.13B
(c) OPNAVINST 4790.4C

3-101. LANTORDCOM DET Oceana Armory. Responsible for ensuring the security, maintenance, issuing and receipt of all small arms, landing force ammunition, demolition material and security locks and keys assigned to the command. The armorer is also responsible for the coordination and execution of all small arms training.

3-102. General. Provide guidance relating to the management of LANTORDCOM DET Oceana armory and provide instructions for the physical security and safeguards concerning all small arms, landing force ammunition, demolition material and security locks/keys assigned to this command. Reference (a) provides guidance relating to the coordination and execution of small arms management and training.

NOTE: To enter any Arms, Ammunition and Explosives facility requires proper access authorization from OIC LANTORDCOM DET Oceana per reference (b).

a. The armory will be managed and operated by LANTORDCOM DET Oceana personnel designated in writing by the OIC LANTORDCOM DET Oceana to provide maximum security of all small arms, landing force ammunition, demolition material and security locks/keys under the control of the Armory Department.

b. The armory will be locked at all times except when authorized personnel are working, entering or exiting.

c. Personnel authorized to enter the armory will be listed on the approved access list as designated by the OIC LANTORDCOM DET Oceana and posted just inside the armory door per reference (b).

d. Admission of personnel not on the approved access list will be made on a case by case basis and all visitors will be logged into the permanent visitors log book noting time of entry and exit from the armory.

e. Commands having weapons stored in the armory will have on command letterhead an approved access list, on file signed by the Commanding Officer. "By direction" signatures are not authorized.

f. The armorer will maintain appropriate records per references (a) through (c).

g. Tenant commands requesting access will provide at least a 24-hour notice to the armory to draw assigned weapons.

NOTE: Emergencies will be handled on a case by case basis at the discretion and approval of the OIC LANTORDCOM DET Oceana.

h. The interior of the armory will be lighted at all times.

i. Hours of operation for issue and receipt of weapons will be as follows:

(1) Monday through Friday, 0700-1530.

(2) Special operations as required and approved by the OIC LANTORDCOM DET Oceana.

CHAPTER 3
SMALL ARMS MAINTENANCE

SECTION 2

Ref: (a) OPNAVINST 3591.1C
(b) OPNAVINST 4790.4C
(c) NAVSEAINST 8370.2

3-201. Maintenance. The armorer will perform preventative maintenance on all government owned weapons per references (a) through (c).

3-202. Inventory

a. Procedures. All government owned weapons will be inventoried as follows:

(1) Daily by the armorer (sight).

(2) Monthly by the armorer and signature custodian sight). Quarterly by the armorer and signature custodian.

(3) Annually by the armorer and signature custodian.

(4) Upon relief of the armorer and/or signature custodian.

(5) Upon relief of the OIC LANTORDCOM DET Oceana and signature custodian.

b. For paragraphs 3-302.a. (1-5) above, the inventory will be conducted by serial numbers and the results recorded in the armory log. Written reports will be submitted to the OIC LANTORDCOM DET Oceana. Daily and monthly inventories will be visual count inventories recorded in the armory log. Quarterly, custodian inventories will be recorded on custody cards. Signature required.

c. All discrepancies will be reported immediately to the OIC LANTORDCOM DET Oceana per reference (a).

d. Sub-custody of weapons will be per guidelines set in reference (c).

3-203. Inventory Requirements for Activities/Units. Each activity or unit will conduct at least one serial number inventory each month utilizing the most recent small arms and weapons record sheet furnished by Naval Weapons Supply Center,

Crane, Indiana. A minimum of two individuals will be assigned by the Commanding Officer of an activity to conduct the inventories. Results of this inventory will be forwarded to OIC LANTORDCOM DET Oceana upon completion.

CHAPTER 3
PRIVATELY OWN WEAPONS

SECTION 3
GOVERNMENT/PRIVATELY OWNED WEAPONS

Ref: (a) NAVSEAINST 8370.2A
(b) OPNAVINST 5530.14C
(c) OPNAVINST 5530.13B

3-301. General. References (a) and (b) contain guidelines for the issue, receipt and storage of privately owned weapons on board NAS Oceana. The following items are specifically directed:

a. The armorer is responsible for the secure storage only of all privately owned weapons in the armory. Inventory of privately owned weapons will be per reference (c) (semiannually in the presence of the owner).

b. Personnel will notify Security that they have a private weapon that they want to stow at base armory. Security, once notified, will escort personnel to LANTORDCOM DET Oceana for proper storage.

3-302. Maintenance. Maintenance of privately owned weapons is prohibited.

3-303. Issues/Receipts. Issue/receipt of privately owned weapons will be during normal working hours. Twenty four-hour notice is required.

a. All weapons returned after normal working hours will be turned over to NAS Oceana Security Department for safekeeping per reference (a).

b. LANTORDCOM DET Oceana armory personnel will call Security for an escort prior to issuing any private weapon.

c. In the event a weapon is delivered and signed into the armory by anyone other than the owner, the person who owns the weapon must be notified.

d. Any privately owned weapon that is not inventoried within six months and the owner is unable to be contacted, the weapon will be disposed of per current Navy directives.

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CHAPTER 3
SMALL ARMS RANGE - RULES AND REGULATIONS

SECTION 4
RESPONSIBILITIES

Ref: (a) COMNAVAIRLANTNOTE C8011

3-401. OIC LANTORDCOM DET Oceana. Responsible for the safe operations of all small arms ranges, qualifications and scheduling small arms range times at all local area facilities. Personnel will ensure that a qualified Range Safety Officer is present at all times when firing is conducted. The Small Arms Marksmanship Instructor will normally act as Range Safety Officer and will designate another as Firing Line Safety Officer, as required for safe and efficient range utilization. Provide small arms for official training of naval personnel. Allowances of small arms training ammunition are contained in reference (a) and will not be exceeded. The OIC LANTORDCOM DET Oceana is responsible for the accountability of all training ammunition and small arms provided for training within established annual allowances.

3-402. Range Safety Officer. Responsible to the OIC LANTORDCOM DET Oceana for ensuring range safety is observed, economical use of range material is maintained and proper care of equipment and range facilities are practiced. Personnel will adhere to hours and days of host command requested for Navy personnel use, directly supervise and ensure proper conduct of the Firing Line Safety Officers during firing operations, ensure results of all official range firing exercises are recorded on the original and one copy of the Small Arms Qualification Record Form (NAVEDTRA 3574/1) and forwarded to the OIC LANTORDCOM DET Oceana for final approval and signature. Upon final approval, the Small Arms Qualification Record Form will be forwarded to the department/activity concerned for administrative action, service record entries and marksmanship awards if warranted. The Range Safety Officer will keep all small arms and ammunition under full custody and visual surveillance during range operations. Personnel will safeguard against loss or theft of weapons and ammunition in his custody.

3-403. Firing Line Petty Officer. Reports directly to the Range Safety Officer in the support of duties during firing evolutions. One Firing Line Petty Officer is required for every six shooters or portions thereof to maintain firing line safety rules and regulations. In addition to monitoring line safety, personnel will respond to all firing line problems including jams, misfires, hang fires and injuries.

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CHAPTER 3
SMALL ARMS RANGE PROCEDURES

SECTION 5

Ref: (a) OPNAVINST 4790.4C
(b) NAVSEAINST 8370.2A
(c) OPNAVINST 3591.1A

3-501. Description. Small arms range facilities vary depending on which command is providing range time.

3-502. Hours of Operation. Range hours vary depending on which command is providing range time. The Armory Supervisor will coordinate with tenant activities and schedule all range times.

3-503. Scheduling

a. LANTORDCOM DET Oceana Armorer is responsible for scheduling the range for training. Use of small arms ranges may be scheduled by phone at 433-2492 and must be supported by range request at least seven working days in advance. There will be no firing on Sunday, holidays or at night unless authorized by the OIC LANTORDCOM DET Oceana. As always, official training will take precedence over all other range use.

b. All ammunition to support the range party requires a four-part requisition 8010/1, completed and signed by the authorized requisitioning activity. The requisitioning activity authorized sample signature must be on file with LANTORDCOM DET Oceana.

c. All requisitioned ammunition will be delivered to the small arms range on the day scheduled. LANTORDCOM DET Oceana Magazine Department or Armory Department will make delivery. Activities are not authorized to transport the ammunition. A minimum of six and a maximum of 50 personnel constitute a range party. If the six-person minimum is not met, the range period will be canceled. The range party will muster 30 minutes before scheduled range time with the armorer at the range. Failure to muster on time will result in cancellation of the range period.

d. LANTORDCOM DET Oceana Range Safety Officer will oversee all range activities and report any discrepancies immediately to the OIC LANTORDCOM DET Oceana. All personnel firing on the range will be subordinate to the LANTORDCOM DET Oceana Range Safety Officer while in performance of his duties.

e. All personnel using the range are required to wear approved hearing and eye protection. It is mandatory that they be used throughout the firing evolution.

3-504. Privately Owned Weapons. Privately owned weapons are not authorized for use on any of the area ranges except for approved government agencies such as Naval Criminal Investigative Service, Federal Bureau of Investigation and Customs.

3-505. Planned Maintenance of Small Arms. All activities will provide for a planned maintenance program. This program will consist of existing maintenance documentation that is listed as the Maintenance Indexes Page in Appendix A of reference (a). Generally, each small arm or weapon will be given a pre-fire check prior to use to ensure it is safe to operate and a post fire cleaning and inspection after firing to ensure that all dirt and fouling is removed and it is ready for use. During periods of non-use, periodic inspections, i.e., quarterly etc. and cleaning will be performed by the owner activity to prevent rust and deterioration of the equipment.

3-506. Range Safety Regulations and Procedures

a. During all range operations there will be an LANTORDCOM DET Oceana Range Safety Officer present. NO EXCEPTIONS.

b. Prior to all firing exercises the range must be policed for any objects that may cause a ricochet.

c. Pyrotechnics, including tracer rounds, are PROHIBITED at all times per reference (b). Tracer rounds must be removed from belted ammunition prior to use on the range.

d. During authorized night shoots there will be one Line Petty Officer for every two shooters per reference (c).

e. All personnel using range facilities are responsible for reading and understanding the following safety regulations and procedures:

(1) All personnel must be instructed regarding the proper handling, loading and firing of small arms before firing on the range. NO EXCEPTIONS ALLOWED.

(2) When firing is being conducted, a BRAVO flag will be flown from the flag pole at the range and from a pole at any access roads leading to the range or Surface Danger Zone (SDZ) down range prior to live fire exercises commencing.

(3) The Range Safety Officer will call a "cease fire" whenever the potential for low flying aircraft crossing into the SDZ is observed. The minimum altitude for aircraft in this area is 500 feet.

(4) Upon receipt, all weapons are to be considered "loaded" until the individual has performed an inspection to ensure that they are empty and safe.

(5) All safety features on each weapon will be utilized whether the weapon is loaded or unloaded. Fingers will remain outside the trigger guard until shooters are in firing position and the command "fire" is given.

(6) No attempt will be made to disassemble any weapon on the firing line.

(7) A weapon will not be fired until a complete inspection has been performed to insure that no rust preventative compound, cleaning patches, dirt, dust, or other obstructions are in the barrel or chamber.

(8) Each person will fire only at his/her assigned target.

(9) No weapon will be loaded except on the firing line and then only on the command "lock and load."

(10) Never point a weapon at anything except the authorized target.

(11) At no time will a person turn-around on the firing line with a weapon in their hand or while firing is in progress.

(12) For 9MM semiautomatic pistols, at the command "cease fire," move safety to the on position or decock.

(13) Do not cross the firing line until the order has been given; "the line is clear, advance and mark your targets."

(14) When a misfire, hang-fire or other malfunction occurs, point the weapon down range (forward), toward the target, raise the non-shooting hand, shout "jam" and hold this position until range personnel correct the malfunction.

(15) At the command "cease fire," when the firing evolution is completed, all weapons will be unload with the breech open and placed on the bench. Individuals will then step back from the firing line.

(16) Before leaving the range area, all weapons will be inspected by the Range Safety Officer to insure they are unloaded and in a safe condition.

(17) Weapons not in use will be arranged neatly on rests with the breeches open.

(18) Any order given by the Range Safety Officer or Firing Line Petty Officer on the firing lines is to be instantly obeyed without question.

(19) All vehicles will be parked in designated areas only.

(20) Firing of weapons at flags, stands or any object other than the designated target is strictly prohibited. LANTORDCOM DET Oceana will aggressively prosecute intentional misconduct with any firearm.

(21) A Corpsman or qualified Emergency Medical Technician must be on call before firing may be conducted.

(22) Any person not complying with this instruction or any other safety regulation may be removed from the range and is subject to disciplinary action.

CHAPTER 4
READY SERVICE MAGAZINES/PORTABLE MAGAZINES

SECTION 1

Ref: (a) NAVSEA OP 5 Vol I
(b) OPNAVINST 5530.13
(c) TWO10-AC-ORD-030

4-101. Regulations/Operations. The rules and regulations of paragraphs 4-101 and 4-102 apply equally to all ready service/portable magazines.

4-102. Ready Service Magazine Storage. The following types of ordnance material may be stored in ready service magazines, quantity not to exceed the sited net explosive weight (NEW). Compatibility requirements will adhere to reference (a).

a. Distress signals

b. CADS

c. Military pyrotechnics

d. Rocket seat motors

4-103. Portable Magazine Storage. Portable magazines will be provided to users for intermediate storage only. These magazines will be utilized for AEPS rocket motors and aircraft ejection seat cartridge actuated devices, DOD Hazard Class 1 Division 3 and 4. This material may be stored in quantities up to physical capacity of the magazine.

4-104. Checkout Procedures. All ready service magazines will be signed for by air wing/squadron Ordnance/Weapons Officer who will be responsible for compliance with regulations outlined in this instruction and all other governing directives.

4-105. Turn-in Procedures. Prior to departure of a squadron or air wing from NAS Oceana for a period of more than 30 days, the assigned magazine will be cleared of all ammunition and completely cleaned. LANTORDCOM DET Oceana along with a representative of the air wing/squadron will inspect magazines.

4-106. Magazine Keys. OIC LANTORDCOM DET Oceana is designated custodian for keys to all magazines on NAS Oceana. The OIC LANTORDCOM DET Oceana may temporarily sub-custody the keys for ready service magazines to a designated representative of a wing/squadron to permit access to assigned magazines. The

representative will be designated in writing by wing/squadron Commanding Officer and establish effective security control for the keys in their possession per reference (b).

NOTE: Locks securing magazines or other ammunition storage facilities will not be cut without expressed permission of OIC LANTORDCOM DET Oceana.

4-107. Inspections. Regular, frequent inspections will be conducted on all ready service/portable magazines. OIC LANTORDCOM DET Oceana is responsible for conducting these inspections at least every 30 days. Squadron Ordnance/Weapons Officers will conduct independent inspections on assigned ready service/portable magazines at least weekly.

4-108. Inspections Criteria. References (a) through (c) provide the minimum requirements for magazine inspections.

CHAPTER 4
MAGAZINES AND MAGAZINE AREAS

SECTION 2

Ref: (a) NAVSEA OP 5 Vol I
(b) TWO10-AC-ORD-010

4-201. Magazine Regulations

a. All magazines, magazine areas and ready service lockers (RSL) are under the cognizance of OIC LANTORDCOM DET Oceana and will be administered and maintained as outlined in this instruction and reference (a).

b. A Bravo flag will be displayed near the entrance to magazine areas, explosive operating buildings and designated assembly areas when crews are working.

c. Service and ready service lockers will be inspected per references (a) and (b). Items to be noted include security, safety, cleanliness, atmosphere and identification of contents and posting of magazine contents. Any abnormal condition or discrepancy will be reported to the OIC immediately upon discovery.

d. Magazines will remain closed and locked except for authorized work, daily inspections, cleaning, repairs and ventilation. During times magazines are open, two responsible persons will be in attendance.

e. Explosives, ammunition and ammunition components will be stored in such a manner as to ensure against toppling or collapse. All stacks of ammunition will be segregated by type, filler, size and lot designation in such a manner as to permit inspection. The bottom layer will be raised off the floor by use of suitable metal dunnage in order to protect the material from water, dampness and to maintain a ventilation space between the bottom of the pile and the floor.

f. Unauthorized personnel will not be permitted to enter or remain in any magazine or explosive area.

g. Magazines and other buildings containing ammunition or explosives must be kept scrupulously clean. Dangerously combustible material will not be permitted in or near magazines or other buildings containing ammunition.

h. Personnel will not be allowed to take matches, lighter or other fire, flame or spark producing devices into any

magazine or explosive area except by written authority of NAS Oceana Commanding Officer and then only in connection with authorized work.

i. Empty containers, packing material, tools or similar items will not be stored in magazines.

j. Thunderstorms. Refer to Chapter Seven.

4-202. RSL Inspection Criteria

a. Magazine/Magazine Area Inspection

(1) Regular, frequent inspections will be conducted on all magazines and ordnance handling facilities per reference (a). These inspections will be conducted at an interval of not more than thirty days and will include the following:

(a) Magazines overall condition including doors and security locking devices.

(b) Posting of proper safety precautions and explosive limits.

(c) Cleanliness and elimination of fire hazards.

(d) Operability of vents.

(e) Condition and proper storage of contents.

(f) Compatibility of stored material.

(g) Grass/vegetation less than 18 inches in height.

(h) Fire-Fighting equipment.

(i) Proper firebreaks.

(j) Access road conditions.

(k) Security and condition of fences and ingress/egress gates.

(l) Proper identification placards.

(m) Lightening systems.

(n) Alarm systems when applicable.

(2) OIC LANTORDCOM DET Oceana or assigned personnel will conduct the magazine/magazine area inspection for all magazines and areas.

(3) Magazine area inspection reports will be forwarded to OIC LANTORDCOM DET for review. OIC LANTORDCOM DET will take such actions as necessary to correct discrepancies.

(4) Magazine/magazine area inspection reports will be maintained on file for one year.

b. The magazine area primary electrical grounding system for lightning protection and secondary static electrical grounding system will be inspected and tested by the Public Works Center (PWC) every 24 months, and visually inspected by PWC every six months. Results of these tests will be forwarded to the OIC LANTORDCOM DET. See reference (a) for information on newly installed or modified systems testing requirements.

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CHAPTER 5
TRANSPORTATION OF EXPLOSIVES

SECTION 1
GENERAL

Ref: (a) COMNAVAIRLANT 8023.5
(b) NAVSEA SWO20-AG-SAF-010
(c) Code of Federal Regulations 49
(d) NAVSEA SWO20-AF-ABK-010
(e) NAVSEA SWO23-AH-WHM-010
(f) NAVSEA OP 4461
(g) NAVSEA SWO20-AC-SAF-010
(h) OPNAVINST 4790.2H
(i) OPNAVINST 5102.1C
(j) OPNAVINST 8000.16A

5-101. General

a. A variety of vehicles and Materials Handling Equipment (MHE) are authorized for the handling and on station movement of ammunition and explosives at NAS Oceana. These vehicles and MHE are as follows:

(1) Pick-up trucks specially configured by PWC with wooden beds, explosive placards, weapons trailer electrical connectors, spare FUSES and an approved fire extinguisher.

(2) Weapons/SE Tow Tractor A/S 32A-30

(3) Electric (EE Model) forklift

(4) Diesel forklift

(5) Tractor/Trailer trucks with wooden flatbed trailer

NOTE: Aircraft tow tractors are not authorized for the movement of ordnance.

b. The term "ordnance vehicles" will be used collectively to refer to any of the above vehicles and MHE. Ordnance vehicles are the only authorized equipment for on station handling, movement and transportation of ammunition and explosives.

c. An ordnance vehicle is only authorized for use after satisfactory completion of the pre-operational inspections.

d. Vehicles with plastic insert bed liners will not be used to transport ammunition.

5-102. Ordnance Vehicle Use

a. Use of ordnance vehicles for handling and transportation on any public road requires an explosive license issued or validated by OIC LANTORDCOM DET Oceana. Explosive drivers must also be qualified and certified per references (a) through (c) and have in their possession a current Explosive Medical Examiners Certificate, U.S. Government Motor Vehicle Operators Identification Card OF 346 and their state drivers license. Explosive drivers required to access the airfield will hold Airfield Certification Cards (Ramp Pass) as required by the Air Operations Officer. The A/S 32A-30 Weapons/SE Tow Tractor also requires a support equipment (SE) license issued by the Aviation Intermediate Maintenance SE Division.

b. Use of ordnance trucks for any purpose other than direct support of an ordnance-related function or evolution is prohibited. Only qualified/certified personnel with a valid and current explosive driver's license are authorized to operate an ordnance vehicle while transporting ordnance. Unauthorized use can be cause for loss of license and certification. Ordnance pickup trucks are designed for use on the flightline for transportation of ammunition and explosives. These trucks are also to be used for towing explosive laden Amarment Weapons Support Equipment (AWSE) to and from the flightline. Unauthorized use of vehicles will be recalled by the type wing Ordnance Officer.

5-103. Ordnance Vehicle Weight Test and Certification. All MHE requiring periodic weight test including forklifts, pallet trucks and cranes will have a stencil or tag affixed certifying a valid and current weight test before that equipment is authorized for handling or transporting any ammunition or explosives.

5-104. Assignment and Sub-custody of Ordnance Vehicles. The Public Works Officer will act as custodian of all ordnance vehicles/handling equipment and may sub-custody these vehicles to transient/tenant activities on an as required basis.

5-105. Return of Ordnance Vehicles

a. Ordnance trucks on sub-custody to transient activities will be returned to Public Works Transportation prior to departure from NAS Oceana. When detachments are left behind, special arrangements can be made on a day-to-day basis for temporary use of a truck.

b. When an ordnance truck is required to be returned for repair or preventative maintenance, a replacement truck will be

provided on an "as available" basis. When a replacement is not available the squadron/visiting activity should contact the appropriate type wing Ordnance Officer or host squadron for truck reassignment within the wing.

c. If willful abuse, misuse or negligence is suspected, the activity in custody will request a replacement vehicle in writing with an explanation of corrective actions taken to prevent a recurrence.

5-106. Ordnance Vehicle Inspection/Configuration

a. Ordnance vehicles will be kept foreign object damage (FOD) free. Vehicles are subject to weekly inspection by type wing ordnance officers.

b. An inspection on ordnance trucks will be performed daily by the first operator and again by each subsequent operator of the ordnance trucks using the Operators Inspection Guide and Trouble Report (NAVFAC Form 9-11240/13 (12-69)). Discrepancies detected during this inspection or during use will be reported to Public Works Department.

c. All vehicles used to transport ammunition and explosives must be in perfect electrical/mechanical condition and equipped with all safety equipment required by references (b), (d) and (e). Each trailer used for transporting ammunition and explosives must also be in perfect mechanical/electrical condition and equipped with all safety chains, tie-down straps, chocks and safety pins. Missing equipment will be cause for rejection of the equipment for transportation of explosives. The following minimum safety equipment is mandatory for ordnance vehicles:

(1) One approved fire extinguisher with a minimum ratio of 10 B:C or greater capacity with a fire department inspection tag indicating satisfactory inspection within the previous 30 days. The safety wire seal and safety pin will be in place.

(2) Four placards; one located on the front, rear and each side of the vehicle.

(3) One copy of the glove box edition, reference (d) (Trucks only).

(4) One Accident Report (Standard Form 91).

5-107. MHE. A pre-operational inspection will be satisfactorily completed on all MHE prior to each use, per the applicable equipment checklist. Immediately upon discovery of deficiencies, defective equipment will be taken out of service until the equipment has been returned to operational status.

5-108. Safety Precautions and Speed Limits for Ordnance Vehicles

a. Speed limits for trucks and towed trailers for on station transportation of ammunition are as follows:

(1) Ordnance trucks

(a) 15 mph in magazine areas and on the airfield.

(b) 5 mph in the vicinity of aircraft.

(c) 25 mph on public roads not posted at a lesser speed.

(2) Aero 51 trailers

(a) 15 mph for empty or loaded single trailers.

(b) 10 mph for empty or loaded trailers in tandem (maximum of two loaded or unloaded trailers).

(3) MHU 126/MHU-202

(a) 15 mph for single empty trailers.

(b) 10 mph for single loaded trailers.

(c) 5 mph for empty or loaded trailers in tandem (maximum of two loaded or unloaded trailers).

(4) Forklift trucks with load engaged will not exceed 5 mph or as fast as the safety walker can walk.

b. All safety equipment will be installed and operable. The Aero 51, MHU 126, MHU-185 and MHU-202 weapons trailers will be equipped with an electrical inter-connector cable attached to the towing vehicle from the towed trailer and between trailers towed in tandem. Different types of trailers will not be towed in tandem.

c. Per reference (f), during loading or unloading, the driver/operator will ensure the following:

(1) The vehicle and trailer are correctly positioned in the loading area.

(2) The engine is shut off.

(3) The transmission is in park for automatic transmissions or the lowest forward gear for manual transmissions with the emergency brake applied. For diesel powered vehicles equipped with standard transmissions, the gearshift lever will be left in the neutral position and the parking/emergency brake applied. Wheels on the truck and/or trailer will be choked.

(4) Smoking or flame producing devices are not permitted within 25 feet of the truck/trailer.

(5) The interior of the cargo space is clean of FOD.

(6) The floor of the cargo bed is lined with wood or nonferrous metal.

(7) Compatibility of the load as authorized in references (d) and (g).

(8) Placards are proper and in place.

(9) The vehicle and trailers are not left unattended for any reason.

(10) MHE for explosives are used only in the locations authorized using the guidelines of reference (e).

(11) When stopped and the engine is turned off, keys are removed from the ignition and wheels are choked.

(12) When using MHE or a crane, weight limitations will not be exceeded. All electric forklifts authorized for handling explosives will be of the EE/EX type, painted yellow, have their designation painted on each side and the rear in four inch high block letters. Diesel forklifts and electric pallet trucks will have the "EE" or "DS" designation painted in the same manner as the electric "EE" forklifts. The rate capacity, UL-type and basic weight must be stenciled on the MHE in full view of the driver.

(13) Overhead guards on forklifts are required.

(14) An ANSI Z89.1 approved non-metallic safety helmet is worn while on or around forklift operations.

(15) Accidents/incidents occurring during the handling and/or transportation of explosives, or inert devices simulating explosive material or devices are reported per references (h) through (j). When vehicles are involved, the explosive

incident/accident report negates the requirement for a motor vehicle accident report (RPT Symbol 5102-4). In all cases the OIC LANTORDCOM DET Oceana and ESO will be notified.

(16) No refueling is conducted.

(17) Safety precautions contained in reference (e) are closely observed during battery charging operations and material handling operations.

(18) Ordnance vehicles with internal combustion engines are not operated inside magazines. Diesel or gasoline forklifts are prohibited inside closed bed trailers.

(19) The operator will complete the "Notice of Unsatisfactory Operation of Materials Handling Equipment" (NAVSUP Form 10490). Additionally, a NAVAIR 4790/52 (daily) card will be maintained on all equipment on sub-custody from the AWSE Branch.

CHAPTER 5
ORDNANCE VEHICLE LICENSE REQUIREMENTS AND THE EXPLOSIVE DRIVER QUALIFICATION AND LICENSING PROGRAM

SECTION 2

Ref: (a) COMNAVAIRLANT 8023.5
(b) OPNAVINST 4790.2H
(c) NAVSEA SWO20-AF-ABK-010

5-201. Ordnance Vehicle License Requirements

a. Per references (a) through (c), all personnel, military or civilian, authorized to transport explosives with a powered vehicle must have an explosive driver's license as described below. The requirement includes all commercial/industrial trucks, materials handling equipment, forklifts and self-powered pallet trucks.

b. Ordnance Pickup Trucks and Other Commercial Type Trucks and Tractors. A U.S. Government Motor Vehicle Operators Identification Card OF 346 is required for transporting explosives, operating commercial type trucks (including ordnance pick up trucks) and tractors, in addition to, and as a prerequisite for an explosive drivers license. LANTORDCOM DET Oceana provides training and makes recommendations for issue of the OF 346. OIC LANTORDCOM DET Oceana is the issuing authority for the station. When issued as a requisite for an explosive drivers license, the OF 346 must have the following statement typed or stamped in the 'Other Records' section: "Explosives Driver" (must hold a current medical certificate signed by a medical doctor). Additionally, the OF 346 is valid only if medical examiners certificate is valid.

c. MHE. All self-propelled MHE requires the successful completion of a formal course of instruction conducted by LANTORDCOM DET Oceana and an U.S. Government Motor Vehicle Operators Identification Card (SF 96) issued by the Public Works Officer. A SF 46 license issued by other activities will be reciprocally accepted at NAS Oceana on a case by case basis.

d. Explosive Driver's License. All personnel, military or civilian, who are required to transport ammunition and explosives on station, must have in their possession an OF 346 license issued by OIC LANTORDCOM DET Oceana and a current medical examiners certificate. This license must contain all information as described in paragraph 2. The license is required in addition to the basic operator's license and is

mandatory for all self-propelled ordnance handling equipment when transporting ordnance. Qualifications for explosive drivers are as follows:

(1) A physical examination by a certified medical doctor (Physicians Assistants not authorized).

(2) Be recommended by the Commanding Officer, Officer In Charge or department head.

(3) Be at least 18 years of age for on station driving and 21 years of age for off station driving.

(4) Hold a valid state operator's license.

(5) Successfully complete an Explosive Drivers course.

5-202. Certification and Recertification of Explosive Drivers

a. Upon issue of an explosive driver's license the individual must be certified for the work task(s) prior to being authorized to operate explosive laden self-propelled vehicles. The Ordnance/Explosive Handling Qualification and Certification Program is administered by activities Weapons Officer.

b. Certification of explosive drivers must be limited to the qualification dates on the explosive driver's license.

c. Any action that de-certifies an explosive driver requires cancellation of the explosive driver's license. Loss of state or on base driving privileges can result in de-certification and loss of explosive driver's privileges.

d. The ESO will closely monitor all explosive handling operations on board NAS Oceana. Failure of any explosive driver to fully comply with the rules and regulations contained herein will be cause for revocation of explosive driving privileges.

CHAPTER 5
ON STATION HANDLING AND TRANSPORTATION OF EXPLOSIVES

SECTION 3

Ref: (a) NAVSEA SW020-AG-SAF-010
(b) NAVSEA SW020-AF-ABK-010
(c) NAVSEA SW023-AH-WHM-010

5-301. On-station Requirements. Trucks engaged in on station transportation of explosives will meet the inspection criteria of reference (a). Drivers will be qualified and licensed per provisions of section 2 and vehicles will be equipped and configured per paragraph 5-106. Trucks and allowed trailers will have warning lights flashing and headlights on (low beam) during explosive moves. Placards will be configured as follows:

DOT Class	Type Placard	Type Truck
1.1	Explosives 1	Ordnance
1.2	Explosives 2	Ordnance
1.3	Explosives 3	Ordnance
1.4	None Required (see note)	Ordnance
Inert	None Required	Material vehicles

NOTE: For Class "1.4" exceeding 1000 lbs. NEW. "Explosives 4, Dangerous Material or class "C" placard is required.

5-302. Passengers in Explosive Laden Vehicles. The driver and at least one other qualified/certified individual, preferably an explosive driver will occupy the cab of a three-passenger ordnance vehicle. A maximum of two riders in addition to the driver is authorized on station only. No one will be permitted to ride in the cargo compartment of a vehicle transporting ammunition and explosives. In the event of a breakdown, a qualified explosive driver must remain with the vehicle.

5-303. Ordnance Safety Devices. Ammunition and explosives transported on station will have all safety devices installed per references (b) and (c).

5-304. On-station Driving Regulations

a. Observe and obey all road signs.

b. Maintain safe clearances.

c. Do not overtake or pass other vehicles.

d. Use a director when backing or during tight maneuvering.

e. Maintain a safe following distance of not less than 100 feet.

f. Yield right of way to ambulances, fire-fighting equipment, security vehicles with warning lights flashing and military formations. When an emergency vehicle approaches, pull off to the side of the road if possible and come to a complete stop.

g. Except as noted above, ordnance vehicles transporting explosives will have the right of way over other vehicles. Vehicles following ordnance vehicles transporting explosives will not pass and will maintain a 300-foot minimum separation distance.

h. Flame producing devices are prohibited in ordnance vehicles transporting explosives. Smoking is prohibited within 50 feet of vehicles transporting explosives.

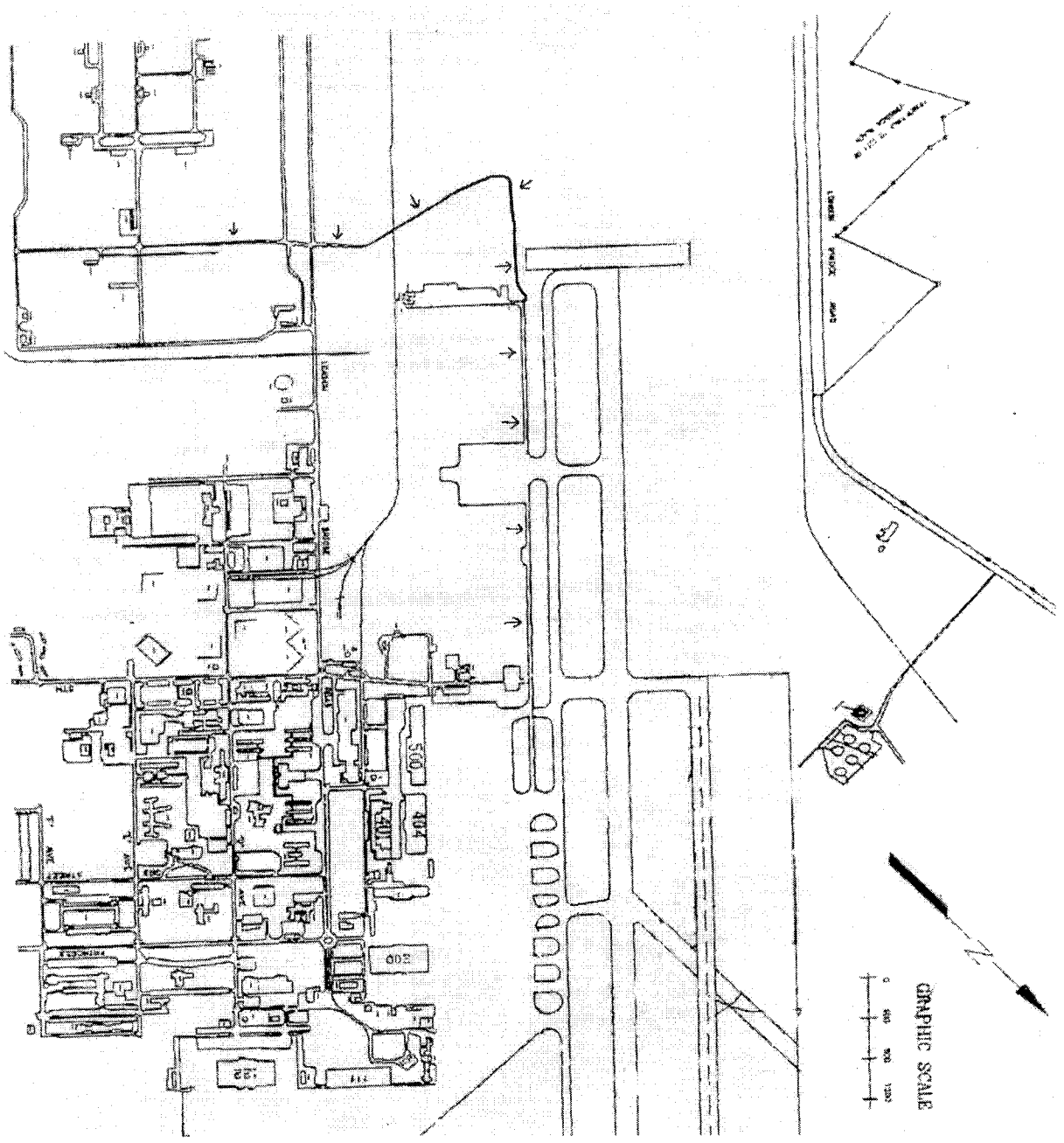
i. In case of an accident or breakdown, an explosive driver will remain with the ordnance vehicle. At no time will the ammunition and explosives be left unattended or attended by a person not qualified to move the vehicle.

j. Know the fire extinguisher, its application and procedures for use.

k. All explosives transported on board NAS Oceana must meet the compatibility requirements of OP 5 Volume I and references (a) and (b). All vehicles transporting explosives will use an authorized explosive route as listed in figure 5-1.

i. Whenever possible, all forward firing ordnance loaded on Aero 51, MHU-126 and MHU-202 trailers will be positioned facing aft.

Explosive route depicted by arrows. Explosive laden trailers will not be towed down Hornet Drive.



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CHAPTER 5
EXPLOSIVE LADEN VEHICLE

SECTION 4

Ref: (a) NAVSEA SWO20-AG-SAF-010

5-401. Suspect Vehicle Procedures. Once a vehicle is determined to be a suspect vehicle, procedures outline in reference (a) will be followed:

WARNING: ALL EXPLOSIVE OPERATIONS WILL CEASE IN THE SUSPECT CARGO AREA PRIOR TO ESCORTING A SUSPECT VEHICLE INTO THE SUSPECT CARGO AREA.

a. Notify Appropriate Personnel

(1) LANTORDCOM DET Oceana Duty Officer

(2) Base Command Duty Officer

(3) Base Fire Department

(4) Explosive Ordnance Disposal

(5) Security Officer (perform security requirements per table 5-1)

b. Cease all evolutions within the assembly area.

c. Escort the suspect vehicle to suspect cargo area by Building 2026 (assembly area).

NOTE: The only authorized safe haven location in the Hampton Roads area is at AOC DET Sewells Point, located on board Naval Station Norfolk.

Table 5-1: SECURITY OF ARMS, AMMUNITION AND EXPLOSIVES IN SAFE HAVEN

CATEGORY	ITEM	SECURITY REQUIREMENTS
I	Missiles and rockets in ready-to-fire configuration such as redeye, stinger, laws etc.	Constant armed guard
II	High explosive and white phosphorous grenades, antitank and antipersonnel mines weighing 100 pounds or less, demolition explosives (C-4, TNT Dynamite), automatic weapons up to and including .50 caliber	Constant armed guard
III	Grenade launchers, 20MM ammunition, rocket warheads incendiary grenades, blasting caps and detonating cord	Check locks and/or seals every four hours
IV	Handguns, small arms ammunition and/or FUSES, smoke and tear gas grenades	Check locks and/or seals every eight hours
Others	All other ordnance items including bombs, missiles, rocket motors and inert	Check locks and/or seals every eight hours items.

CHAPTER 6
HAZARDS OF ELECTROMAGNETIC RADIATION TO ORDNANCE (HERO)

SECTION 1
CONTROL OF HERO

Ref: (a) NAVSEA OP-3565/NAVAIR 16-1-529/NAVELEX 0967-LP624-6010 Volume II PART 1 and 2
(b) HERO Survey
(c) NASOCEANAINST 8020.1A

6-101. General

a. This instruction will apply to all facets of ammunition handling on board NAS Oceana.

b. References (a) and (b) should be referred to when any doubt exists regarding HERO safety.

c. HERO varies greatly with the type of ordnance involved, distance to the radiation source, power output and frequency of the transmitter. Reference (a) divides all ordnance into the following three categories:

(1) HERO Safe Ordnance. Items that are not susceptible and require no general RF restrictions during any phase of normal employment.

(2) HERO Susceptible Ordnance. Items that are susceptible and require radio frequency (RF) restrictions for at least some phases of employment.

(3) HERO Unsafe Ordnance. Items that are susceptible and require RF restrictions for some or all phases of employment.

d. To ensure safety when handling HERO susceptible or HERO unsafe ordnance, precautions must be taken to limit the radiation of RF energy in the surrounding area. Reference (b) contains NAS Oceana's HERO assessment including safe separation distance between ordnance and radiating antennas.

6-102. Responsibilities

a. Air Operations Officer

(1) Ensure that all equipment under the cognizance of this command capable of emitting RF radiation is placarded with the safe operating distance prior to issue. Reference (b) applies.

(2) Be responsible for the setting and securing of HERO conditions.

(3) Ensure that taxing/landing aircraft are informed when HERO conditions are set in the arm/de-arm areas or along the airfield.

(4) Maintain liaison with tenant activities to resolve any conflict in requirements.

(5) Include HERO/Electromagnetic Emission Control (EMCON) radio operator training as a requirement to qualify to operate vehicles on the airfield and on station.

(6) Will review the command's HERO posture once every five years or in the event there are major changes in the electronics suite, ordnance complement or handling procedures. Hero surveys and questions should be addressed to Naval Surface Warfare Center, Dahlgren, Virginia (Code H-22).

b. Commanding Officers, Officers in Charge and Department Heads

(1) Ensure that all operators of communications equipment and aircrews comply with the requirements of this instruction and references (a) through (c).

(2) Ensure transmitters, other than UHF aircraft and aircraft control transmitters, are placarded per reference (b).

(3) Inform the station HERO/EMCON Officer (Ground Electronics Officer at 433-2104) whenever plans are made to employ new electronics equipment that radiates more than five watts of power.

(4) During HERO Condition One establish a HERO/EMCON maintenance area 61 meters (200 feet) from the nose wheel strut of aircraft who's radars must be turned on. This area should be suitably marked with portable stanchions and the introduction of ordnance into the maintenance area must be prohibited.

c. OIC LANTORDCOM DET Oceana

(1) Ensure that all LANTORDCOM DET Oceana personnel are familiar with the HERO restrictions applicable to ordnance operations.

(2) Ensure that no HERO unsafe ordnance leaves the magazine area without adequate protection and proper HERO condition set.

(3) When issuing any weapons or components to a user activity, advise the user if the weapon becomes HERO susceptible or HERO unsafe during assembly, handling or loading operations and what precautions must be taken. It is the responsibility of the receiving unit to set and secure from HERO condition requirements through the Air Operations Duty Officer (AODO).

(4) Inform the HERO/EMCON Officer upon receipt of any new ordnance or component that would become a hazard or be affected in reliability of operation due to RF radiation.

(5) Include HERO/EMCON training as a requirement for explosive driver's license qualifications.

d. Station HERO/EMCON Officer

(1) Be responsible for a continuing program to ensure HERO safety at the station

(2) Conduct a HERO/EMCON drill at least quarterly.

(3) Ensure all hand held and mobile radio's have HERO warning labels affixed and specify distance requirements for HERO susceptible and unsafe ordnance.

6-103. Hero Conditions and Areas

a. The Air Operations Officer, upon notification, sets a HERO/EMCON condition to ensure radiation is maintained at acceptable levels.

(1) HERO Conditions Are

(a) Condition ZERO - all HERO safe ordnance.

(b) Condition ONE - all HERO unsafe ordnance.

(c) Condition TWO - all HERO susceptible ordnance.

(2) HERO Zones Are

(a) Zone 1 - Combat Aircraft Loading Area (CALA), weapons storage and assembly area (WSAA), and the transporting route from the WSAA to the CALA.

(b) Zone 2 - Airfield; Special Operations Area 10; arm/dearm areas 1, 2, 2A, 3, 4, and 5; flight-line ordnance loading areas 7 and 8; and aircraft parking aprons.

b. HERO Condition ONE. HERO Condition ONE will be set by the AODO prior to granting landing clearance to any aircraft carrying external ordnance which contains electro-explosive devices (EED) of unknown HERO characteristics or external ordnance known to be HERO unsafe, HERO unreliable, or any damaged weapon. He will set HERO Condition ONE by passing the word, "SET HERO CONDITION ONE for (aircraft type/side number) to be parked at (location on field)

NOTE: Maintain the HERO unsafe ordnance separation distances for mobile and portable transmitters as listed in Appendix A of reference (b).

c. HERO Condition TWO

(1) HERO Condition TWO will be set by the AODO prior to permitting loading/offloading of any aircraft carrying any ordnance known to be HERO SAFE when loaded on an aircraft but HERO unsafe, unreliable, or susceptible during handling. He will set HERO Condition TWO by passing the word, "SET HERO Condition TWO for (aircraft type/side number) to be parked at (location on field.

(2) Apply the following requirements when setting HERO Condition TWO:

(a) Silence all aircraft HF transmitters and maintain the HERO unsafe ordnance separation distances for all other aircraft transmitters as listed in chapter 2 of reference (a).

(b) Maintain the HERO unsafe ordnance separation distances for mobile and portable transmitters as listed in Appendix A or Chapter 2 of reference (a).

d. HERO Restrictions

(1) Radio/radar transmissions by aircraft being loaded/downloaded/ armed/de-armed are prohibited. When other aircraft are in these areas, and either HERO susceptible or HERO unsafe ordnance is involved, the HERO separation distances of reference (a) must be maintained for all listed emitters, radar's and radio's.

(2) Avoid touching any exposed firing contacts, wiring, contact buttons/bands or umbilical connectors with hands or any metal objects. Do not handle umbilicals and motor fire connectors unnecessarily.

(3) Make no electrical connections to ordnance/weapons before the item is locked in the rack or launcher unless specifically authorized in the NAVAIR loading checklist.

(4) HERO unsafe ordnance will not be transported on the station unless enclosed completely in metal shipping containers or in approved launchers with safety pins installed. Metal pallets are not considered a container.

(5) Ordnance will not be handled unless all electrical connector covers and shorting devices are installed.

(6) Ordnance with EED will be stowed only in approved metal shipping containers.

(7) Portable or installed transceivers will not be used in a vehicle transporting HERO susceptible ordnance.

(8) Portable transceivers operating at a frequency above 100 MHZ with an output of two watts or less may be operated within 10 feet of HERO safe or HERO susceptible ordnance subject to other restrictions provided in reference (a).

e. Securing from HERO. The on-scene Ordnance Supervisor will notify the AODO when HERO may be secured. Upon receipt of the above notification the AODO will notify all stations involved to secure from HERO. All stations controlling radio circuits will broadcast one time: NAS Oceana has secured from HERO Condition ONE or TWO as appropriate.

f. HERO ZONES and Areas. In order to simplify HERO/EMCON, the station is divided into the following zones (see Appendix C of reference (b) for illustration).

(1) Zone 1 - Combat Aircraft Loading Area

(2) Zone 2 - Airfield, Special Operations Area 10, arm/de-arm areas, ordnance load/download are flightlines, aircraft parking aprons and ordnance transportation routes.

(3) To ensure the maximum degree of flexibility and safety and a minimum of interference with fleet operations, NAS Oceana is divided into the following HERO areas:

(a) Area 1 - Abeam approach end runway 5R, heading 230 degrees

(b) Area 2 - Abeam 8000' marker runway 5R, heading 230 degrees

(c) Area 2A- Abeam approach end runway 5L, heading 140 degrees

(d) Area 3 - Abeam approach end runway 32L, heading 140 degrees

(e) Area 4 - Abeam approach end runway 23L, heading 230 degrees

(f) Area 5 - Abeam approach end runway 14R, heading 140 degrees

(g) Area 6 - Ordnance Handling Pad (Hot Pad)

(h) Area 7 - Flight line loading area

(i) Area 8 - Flight line loading area

(j) Area 9 - Southwest corner of ordnance handling pad, (Jammed gun spot)

(k) Area 10 - North Pad (Special Operations Area)

HERO SAFE OR NOT REQUIRED ORDNANCE LISTING

NALC

1W12	1W32	1W73	2W26	2W28	2W36	2W25	2W86	2W89	3W37	3W77
5W47	7W35	7W68	7W79	7W90	A002	A011	A017	A068	A071	A080
A112	A122	A127	A130	A131	A135	A136	A360	A362	A363	A400
A406	A475	A476	A501	A560	A924	AX02	B078	B519	B535	B537
B546	BWAG	BWAI	BWAJ	CY15	E003	E005	E009	E011	E030	E173
E259	E290	E480	E489	E508	E509	E510	E511	E798	E799	E809
E853	E892	E894	E914	E962	E973	EW09	F017	F019	F127	F237
F272	F274	F278	F279	F391	F392	F402	F415	F431	F435	F448
F470	F533	F534	F542	F562	F607	F624	F627	F642	F649	F657
F672	F739	F780	F755	F762	F763	F766	F768	F780	F782	F811
F842	F919	FW14	FW25	FW26	FW32	FW35	FW44	FW56	FW85	FW90
FW94	FW95	FW98	G104	G179	G212	G213	G214	G215	G216	G217
G261	G296	G382	G810	G839	G870	G895	G924	G930	G940	G950
G955	G963	GW03	GW68	GW86	GW90	H141	H142	H308	H316	H663
H664	H831	H930	H931	H933	H945	HW02	HW40	HW42	HW49	J280
J329	J344	J345	J416	J417	J433	JW01	JW15	JW18	JW42	JW99
KW61	L103	L111	L118	L225	L258	L275	L312	L411	L431	L441
L463	L588	L598	L599	L600	L601	LW01	LW02	LW04	LW05	LW07
LW17	LW25	LW50	LW60	LW62	LY07	LY15	LY53	LY57	M202	M258
M259	M282	M284	M397	M499	M506	M507	M517	M520	M543	M548
M571	M572	M573	M594	M595	M613	M614	M670	M681	M682	M688
M689	M700	M710	M719	M720	M726	M727	M728	M741	M742	M758
M783	M826	M881	M897	M938	M939	M941	MA01	MA03	MA04	MA05
MA06	MA07	MA08	MA10	MA12	MA14	MA18	MA19	MA20	MA21	MA22
MA23	MA24	MA25	MA26	MA27	MA28	MA29	MA30	MA37	MA38	MA39
MA40	MA41	MA42	MA43	MA44	MA45	MA46	MA47	MA48	MA49	MA50
MA51	MA52	MA55	MA56	MA57	MA58	MA59	MA60	MA61	MA62	MA63
MA64	MA65	MA71	MA78	MA79	MA80	MA81	MA82	MA83	MA84	MA85
MA86	MA87	MA88	MA89	MA90	MA91	MA92	MA93	MA94	MA95	MA96
MA97	MA99	MB08	MB10	MB11	MB12	MB13	MB14	MB15	MB16	MB17
MB18	MB19	MB20	MB21	MB35	MB40	MB45	MB46	MB47	MB48	MB49
MB52	MB56	MA58	MB59	MB66	MB67	MB68	MB69	MB70	MB71	MB72
MB73	MB74	MB75	MB76	MB77	MB78	MB83	MB85	MB86	MB87	MB88
MB89	MB90	MA91	MB94	MB95	MB96	MB97	MB99	MC01	MC02	MC03
MC04	MC05	MC06	MC07	MC08	MC09	MC10	MC11	MC43	MC45	MC46
MC47	MC48	MC50	MC53	MD45	MD46	MD63	MD72	MD74	MD75	MF04
MF15	MF37	MF47	MF66	MF70	MF71	MF72	MF78	MG52	MG53	MH31
MH32	MH33	MH36	MH37	MH38	MH39	MH40	MH42	MH43	MH44	MH45
MH47	MH58	MJ06	MJ98	MT22	MU86	MW08	MW23	MW59	MW60	MW62
MW63	MW74	MW93	MW98	MY22	NW20	NW23	NW33	NW40	NW41	PB55
PB69	PC61	PD50	PF26	PF27	PF32	PF35	PH70	PH71	PU21	PV09
PV10	PV44	PV76	PV95	PW17	PW32	PY15	R074	R231	R662	R667
R680	R957	VW17	VW21	XW38	XW39	XW40	XW48	XW49	XW50	XW51
XW52	XW53	XW54	XW55	XW56	XW57	XW58	XW63	XW71	XW72	XW84
YW26	YW33	YW34	YW90	ZW64	ZW74	ZW78	ZW86	4W80	A111	A403
3W70	3W78	3W79	4W38	4W40	4W41	4W42	A659	A677	A678	A679
A890	A891	CWAR	FW74	FW92	G496	H122	H567	J147	J271	L139
L168	L553	L554	L580	L585	LW39	LW59	M012	M015	M161	M182
M190	M193	M197	M363	M365	M509	M514	M516	M519	M523	M943
MD48	MD65	MD66	MF08	MF29	MF60	MF73	MF74	MF75	MG11	MW19
MY74	PA42	PA50	PA51	PA52	PA53	PA54	PA55	PA56	PA57	PA58
PA59	PA60	PA61	PA62	PA63	PA64	PA65	PB46	PB66	PC43	PD23
PU23	PU26	PU37	PV13	PV70						

HERO UNSAFE ORDNANCE LISTING
M598 MD90 MD99 MG47

NOTE: All 2.75" and 5.0" rocket motors outside of shipping container for loading in the launcher are considered HERO unsafe.

CHAPTER 7
WEATHER CONDITIONS

Ref: (a) NAVAIR 00-80T-103
(b) NAVSEA OP 5, Volume I
(c) NASOCEANAINST 3440.1B

7-101. General. When severe weather phenomena is forecasted, security of ordnance will take priority over all other storm preparations as delineated in references (a) and (b).

7-102. Storm Threats. The Naval Atlantic Meteorology and Oceanography Detachment Oceana makes notification of impending adverse weather conditions by audio/visual means via the base Weathervision, by telephone and facsimile to key personnel, and by posting latest developing severe weather warnings on their web-page at www.nlmod-oceana.navy.mil. Reference (a) breaks down adverse weather conditions into precipitation, winds, lightning, thunderstorms and severe weather. Reference (b) provides more specific technical information on lightning protection for ordnance facilities. Historically, the greatest danger from destructive weather has come from hurricanes and locally heavy thunderstorms. Reference (c) applies.

a. Thunderstorms. Small-scale storms are always accompanied by lightning, thunder, and occasionally hail. Thunderstorms may produce extremely strong winds with gusts of more than 50 knots and the wind direction may be drastically different from the prevailing wind before the storm. Lightning strikes are common and torrential rainfall with visibility near zero are often encountered.

b. Tornado/Waterspouts. A violent rotating column of air that extends from a cumulonimbus cloud which touches the ground/water. The winds blow spirally upward around the axis of the tornado, reaching average speeds of 120 to 180 knots

c. Other Local Windstorms. Severe windstorm/rainstorms such as those accompanying frontal passages are common in the Tidewater area. Wind speeds increase very suddenly and generally last from 12 to 24 hours.

d. Major Cyclonic Storms. Examples are hurricanes, typhoons and gales. These storms generally affect a wide area and last for days rather than hours. They are characterized by severe winds and torrential rains, surging tides and sometimes tornadoes. They are classified based on wind velocity as follows:

(1) High Wind Warning - Sustained surface winds of 20 knots or greater and/or gusts of 25 knots or greater.

(2) Gale Winds - Sustained surface winds in the range of 34-49 knots inclusive.

(3) Tropical Depression - Sustained surface winds of 33 knots or less.

(4) Tropical Storms - Sustained surface winds in the range of 34 to 63 knots.

7-103. Destructive Weather Conditions

a. Tropical Cyclone Condition V. Destructive winds associated with a tropical system are possible in the area within 96 hours.

b. Tropical Cyclone Condition IV. Destructive winds associated with a tropical system are possible in the area within 72 hours.

c. Tropical Storm Condition III. Destructive winds between 34 and 63 knots associated with a tropical system are possible in the area within 48 hours.

d. Hurricane Condition III. Destructive winds of 64 knots or greater associated with a tropical system are possible in the area within 48 hours.

e. Tropical Storm Condition II. Destructive winds between 34 and 63 knots associated with a tropical system are anticipated in the area within 24 hours.

f. Hurricane Condition II. Destructive winds of 64 knots or greater associated with a tropical system are anticipated in the area within 24 hours.

g. Tropical Storm Condition I. Destructive winds between 34 and 63 knots associated with a tropical system are anticipated in the area within 12 hours.

h. Hurricane Condition I. Destructive winds of 64 knots or greater associated with a tropical system are anticipated in the area within 12 hours.

i. Thunderstorm/Tornado Condition II. Thunderstorms/ Tornadoes are expected within 25 nautical miles of the station within six hours.

j. Thunderstorm/Tornado Condition I. Thunderstorms/ Tornadoes are occurring or are forecast to occur within five nautical miles of the station within one hour.

7-104. Destructive Weather Preparations

a. Thunderstorm/Tornado Condition II. Supervisors will limit work in and around magazines to that quantity of ammunition and explosives that can be safely re-stowed in 15 minutes.

b. Thunderstorm/Tornado Condition I. When notified that Thunderstorm Condition I is set, all exposed ammunition and explosives will be immediately re-stowed. Personnel will be removed from the magazine and the magazine locked. Once an electrical storm commences, magazines will not be reopened. If any ammunition or explosive is left outside a magazine after an electrical storm commences it will be covered and grounded to the maximum extent possible. Transportation and/or handling of exposed ammunition and explosives during an electrical storm is prohibited.

NOTE: During course of instruction/proficiency loads in an aircraft hangar, certified inert training shapes may continue to be loaded during thunderstorm conditions.

NOTE: When Thunderstorm Condition I is set, all ordnance operations will cease. Aircraft already loaded not requiring arming procedures may taxi and launch at the discretion of the unit Commanding Officer and pilot in command as modified by other applicable instructions. Aircraft already loaded with ordnance requiring arming will not be armed during periods of Thunderstorm Condition I. Aircraft landing during the above conditions requiring de-arming will remain in the de-arming area until the downgrade of Thunderstorm Condition I.

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CHAPTER 8
COMBAT AIRCRAFT LOADING AREA

Ref: (a) NAVSEA OP-5, Volume 1
(b) NASOCEANAINST 8020.1A
(c) NAS Oceana HERO Survey

8-101. Explosive Limits

a. The maximum permissible NEW permitted at the CALA at any one time is 30,000 lbs. See Table (8-1) for aircraft separation distances.

b. Reference (a) requires inter-magazine distances to be maintained between explosive loaded combat aircraft. These separation distances are mandatory at NAS Oceana unless specifically waived by the Commanding Officer and then only in cases of absolute operational necessity.

8-102. Mandatory Use of the CALA

a. It is mandatory that the CALA be used for the loading, downloading and/or rearming of combat aircraft carrying hazard class 1.1, 1.2.1, 1.2.2, some training guided missiles, ammunition, and explosives. Refer to Table (8-1) for maximum permissible rounds and combat aircraft parking separation distances.

b. All other hazard class ammunition and explosives (1.3, 1.4) may be loaded on the flight line.

c. CALA will be used for all emergency safing and downloading of HERO unsafe or susceptible ordnance including:

(1) Jammed M61A1 gun systems.

(2) Partially fired LAU-68 rocket pod or LAU-68 rocket pod loaded with any rockets and radiation hazard barrier integrity broken or damage.

(3) Any 5.0" ZUNI rocket motor out of or partially out of an LAU-10 launcher that cannot be properly de-armed.

d. Any guided missile with a live rocket motor when the motor arm/safe device cannot be safe or is suspected of having a malfunction.

e. Any Aircraft returning from flight with intent to launch criteria.

8-103. Combat Aircraft Loading Area Operating Procedures

NOTE: Ensure Bravo flag is raised on top of CALA Building prior to conducting ordnance operations.

a. Control. All aspects of the CALA scheduling, aircraft parking assignments, support facility space assignments, and safety are under the direct control of OIC LANTORDCOM DET Oceana.

b. Scheduling. Use of the CALA may be scheduled by bringing an approved Weapons Requisition Form 8010 to the Magazines Department Leading Chief Petty Officer (LCPO) or Leading Petty Officer (LPO) at Building 1140. You will inform the LCPO/LPO of your desired number of aircraft and amount/type of explosive on each aircraft. CALA aircraft spots will be assigned using a CALA Reservation Request Form provided by LANTORDCOM DET Oceana Magazine Department at time of request.

c. Keys to the CALA Building may be checked out at LANTORDCOM DET Oceana Quality Assurrance Department Building 900 at 433-3618.

d. HERO. References (b) and (c) and Chapter 6 of this instruction discuss HERO and HERO EMCON procedures on board NAS Oceana in detail. The following provides additional guidance:

(1) Reference (c) provides specific frequency and field intensity restrictions on HERO susceptible ordnance handled at Naval Air Station Oceana.

(2) The CALA is designated a HERO susceptible area and the following procedures will be strictly adhered to:

(a) All flight crews and aircraft maintenance personnel are responsible for complying with the appropriate HERO EMCON restrictions.

(b) Under no circumstances will portable maintenance/ordnance transceivers be keyed within 25 feet/7 meters of any type ordnance or aircraft loaded or in the process of being loaded with ordnance (except normally installed CADS/AEPS).

(c) Operation of aircraft radar transmitters is prohibited at the CALA Area.

e. Explosive Limits. OIC LANTORDCOM DET Oceana is responsible for enforcing explosive limits and combat aircraft separation distances at the CALA.

NOTE: Combat aircraft separation will be measured from nearest loaded bomb rack/pylon to nearest adjacent loaded rack/pylon.

f. CALA Area Cleanliness

(1) The provisions of reference (c) regarding the FOD program apply equally at the CALA.

(2) The entire CALA must be kept FOD free.

(3) The Air Operations Officer will ensure frequent sweeping of the CALA and the adjacent taxiways per reference (b).

(4) The squadron(s) scheduling the CALA will conduct a FOD walk-down of entire pad and immediate area daily and prior to starting any aircraft engines.

g. Vehicular Parking. Military vehicles and SE will be parked only in the parking areas adjacent to Building 900 except during servicing of aircraft.

8-104. Fire/Crash/Emergency Procedures

a. Squadron Gunner, Weapons Officer or Chief Petty Officer will act as ordnance handling Safety Supervisor to supervise safety and procedures whenever explosive ordnance is being handled.

b. The Safety Supervisor will closely observe all elements of aircraft, explosive, and personal safety. Immediately stop any evolution where any element of safety is violated until proper corrective action has been taken.

c. In the event of an aircraft fire, the Fire Department will be immediately notified by anyone having knowledge of the fire. Portable extinguishers are available.

8-105. Security Control of Ammunition and Explosives

a. The provisions of Table (5-1) are mandatory.

b. LANTORDCOM DET Oceana will maintain the required security watch on ammunition and explosives in the staging area until turnover to the squadron/unit. At that time, the squadron/unit will provide all required security.

c. Loaded aircraft will not be left unattended. As a minimum, qualified ordnancemen will be assigned to provide the required security surveillance. One watchstander may be

assigned to one or more aircraft providing the aircraft and ordnance are continuously in view.

8-106. Personnel Safety. All personnel working in the area will have and wear, when required, eye, ear and cranial protection.

COMBAT AIRCRAFT SEPARATION DISTANCES
FOR MASS DETONATING EXPLOSIVES

WEAPONS	QTY	NEW	CLASS	A/C SEPARATION
MK 82	2	384	1.1	80
	4	768	1 1	102
	6	1152	1.1	117
	8	1536	1.1	131
	10	1920	1.1	143
	12	2304	1.1	149
	20	3840	1.1	173
MK 83	2	890	1.1	106
	4	1780	1.1	136
	6	2770	1.1	155
MK 84-1/2/3/5	1	472	1.1	87
	2	944	1.1	110
	4	1888	1.1	136
	6	2832	1.1	160
	8	3776	1.1	173
MK 84-6/7	1	485	1.1	87
	2	970	1.1	110
	4	1940	1.1	143
	6	2910	1.1	160
	8	3880	1.1	173
GBU 24	1	115	1.1	54
	2	230	1.1	69
	4	460	1.1	87
	6	690	1.1	98
	8	920	1.1	110
AIM-9M	1	37.7	1.1	51
	2	75.4	1.1	51
	3	103.1	1.1	53
	4	150.8	1.1	61
NATM-9M	1	41.2	1.1	51
	2	82.4	1.1	51
	3	123.6	1.1	57
NATM-9M	4	164.8	1.1	61
AGM-84 series	1	215	1.1	66

AIM-54	1	154.75	1.1	61
AGM-88	1	115.5	1.2	54
AGM-154				
AGM-114				
AIM-7	1	36	1.1	51
AIM-120	1	29	1.2	51
AGM-65 E/F	1	175	1.1	63

Table 8-1

CHAPTER 9
LOADING, DOWNLOADING, REARMING, REFUELING AND AIRCRAFT MAINTENANCE

Ref: (a) NAVAIR 00-80T-103
(b) OPNAVINST 8000.16A
(c) COMNAVAIRLANTINST 8023.5
(d) MIL-HDBK-274(AS)
(e) NAVSEA OP 5

9-101. General

a. All explosives and ammunition loading or downloading from aircraft will be conducted at either the CALA or designated areas of the flight line.

b. All explosives and ammunition loading or downloading from aircraft will be conducted using the aircraft weapons store loading manual supplemented by applicable NAVAIR conventional weapons loading checklist.

c. All explosives and ammunition loading and downloading from aircraft at the CALA must meet the quantity/distance requirements specified in Table 8-1. The Weapons Officer will resolve any questions in quantity/distance requirements.

d. Cockpit weapons loaded signs are required for all loaded aircraft.

e. Aircraft will not be fueled and loaded/downloaded simultaneously.

f. Loading/downloading and oxygen servicing, other than converter replacement in the aircraft, will be conducted as separate evolutions.

g. Ammunition and explosives, including captive carry missiles (CATM) and practice bombs with signals, staged for loading or actually loaded on aircraft will not be left unattended. The evolution supervisor will assign a watch stander to keep the ammunition, explosives and loaded aircraft under constant security and safety surveillance. The watch standers sole duties will be that of maintaining safety, security and accountability of the material.

h. CATM, 20MM Target Practice (TP) may remain loaded overnight providing all electrical connections are disconnected and rendered electrically/mechanically safe.

i. CATM may be stowed in hangars during adverse weather and during extended period on non-use.

9-102. Ammunition and Explosive Assembly/Disassembly. All non all-up-rounds ordnance requiring assembly or disassembly of components will be conducted only at LANTORDCOM DET Oceana and will be accomplished by properly qualified and certified personnel, with the following exceptions: Practice bombs (MK-76/BDU-48/LGTRs).

9-103. Hangared Aircraft

a. No explosive devices will be allowed to remain on board aircraft that are hangared or in sheltered facilities ashore except as follows:

(1) Emergency egress systems.

(2) Helicopter rescue hoist cable cutter CADs.

(3) Fire extinguishing cartridges installed in aircraft engines are exempt from the safing requirements.

(4) All other cartridges will be removed prior to hangaring aircraft.

(5) Aircraft with internal M61 series guns loaded with TP/Target Practice Tracer (TPT) ammunition may be hangared for up to 24 hours. In such cases, all ammunition will be cycled into the drum and the gun electrically disconnected.

b. In all cases, safety precautions for installed items will be strictly adhered to, safety pins installed, and cartridges electrically disconnected or mechanically locked to prevent the possibility of in-advertent firing. At no time, when maintenance is to be performed on an aircraft, where the possibility of firing exists, should ordnance (including CADs) be left in or on the aircraft.

c. Under conditions of war or extreme emergency, these requirements may be modified as necessary with the concurrence of the station Commanding Officer. This may include ready alert aircraft during times of adverse weather. In such cases, all applicable safety precautions must be observed at all times.

9-104. Maintenance on Loaded Aircraft

a. For the purpose of this paragraph, loaded aircraft will be construed to mean any aircraft with any explosive, propellant, or pyrotechnic device on board regardless of purpose or intended use and is restricted to only that maintenance authorized by reference (a).

b. Per reference (b), any equipment normally containing explosive or explosive devices will have the explosives or explosive device removed prior to commencing maintenance on that system and such action certified in writing. This certification for an aircraft may be accomplished by the use of a maintenance action form or established local procedures.

c. High power turns will not be conducted with ordnance loaded on the aircraft.

d. Ejector rack CADs will be removed.

e. Low power turns are permitted per reference (a) to prepare aircraft for the next launch. Ordnance will be safed to the maximum extent possible.

f. As previously discussed, maintenance will not be conducted on loaded aircraft, however, routine servicing and minor maintenance that would ready the aircraft for the next launch may be conducted per reference (a).

g. Fresh water wash-down will not be conducted with ordnance loaded on aircraft.

9-105. Aircraft Fueling/Defueling

a. Fueling of explosive loaded aircraft with fuel trucks is authorized at the CALA/flightline provided the store(s) is/are properly safed per the Aircraft Weapons/Stores Loading Manual.

b. Hot refueling of aircraft with the following unexpended ordnance/aircraft stores is authorized providing they have been safed and dearmed per the aircraft weapons/stores loading manual or checklist. Aircraft decoy flares are strictly prohibited in the fuel pit area.

(1) Electrically dearmed M61A1 gun systems loaded with TP/TPT ammunition if the gun system is not jammed.

(2) Unexpended inert MK-80 series bombs, MK-76 and MK-106 practice bombs or any other practice bomb with flash or impact signals.

(3) Captive carry missiles.

(4) Unexpended dummy ordnance.

(5) Internally carried unexpended pyrotechnics and signals, sound underwater signals. Aircraft decoy flares, pyrotechnics and para-flares are strictly prohibited in the fuel pit area.

(6) Unexpended chaff and impulse cartridges ALE series dispensers.

9-106. Aircraft Loading and Downloading

a. Qualified/certified personnel, per reference (c), will conduct all aircraft loading and downloading.

b. The loading/downloading crew supervisor will ensure that FOD walk-down is conducted in the immediate area after completion of the evolution.

c. Grounding of loaded aircraft is mandatory. Only authorized/certified grounding points and cables will be utilized per reference (d).

d. Weapons safety devices will be retained by the loading crew leader and reinstalled prior to or after downloading. These devices will not be destroyed. All safety pins and flag devices from expended ordnance and unguided missiles will be turned into the Weapons Department for reuse including missile umbilicals and lower motor fire connectors.

e. The CALA will be used to load and download all categories of explosives or other hazardous materials on combat aircraft limited only by a NEW of 30,000 pounds or equivalent hazard class 1.1.

f. The flightline loading areas may be used only for combat aircraft loading and download of hazard Class 1.3 and 1.4.

g. Aircraft should be pointed in a direction that creates the least hazards to personnel and equipment. This same rule will apply to downloading of properly safed unexpended ammunition and explosives.

h. Only armament and weapons support equipment authorized in the loading checklist or stores loading manual is authorized for aircraft loading/downloading. All handling equipment configurations will be per applicable directives. If required, all handling equipment will be inspected for current weight test prior to the day's use. Specified safe working loads will not be exceeded.

i. Loading/downloading crew leaders will ensure that satisfactory pre-operational inspections are completed on all Weapons Support Equipment/Aviation Support Equipment per applicable Naval Air Systems Command (NAVAIR)/Naval Sea Systems Command (NAVSEA) maintenance requirement cards.

9-107. Aircraft Arming/De-arming

a. All aircraft, ordnance and weapons will be armed and/or de-armed in strict accordance with the NAVAIR weapons loading checklist. All items to be performed in the checklist "RE-ARM" area may be accomplished in the loading areas designated in Figure 9-1. All items to be performed in the "ARMING" area, including stray voltage check for forward firing ordnance, will only be conducted in the designated ARMING AREAS Figure 9-1. For De-arming, all items to be completed in the checklist "DE-ARM" area will be accomplished only in the "DE-ARMING" area designated in Figure 9-1.

b. CATM with inert motors and warheads may be armed/ de-armed at the end of the squadron flight line. The area ahead and immediately behind aircraft will be cleared and maintained clear until completion of arming/de-arming. Tactical missiles or CATM missiles with live motors will be armed/de-armed per applicable checklist.

9-108. Hung Ordnance

a. Aircraft returning to NAS Oceana with hung ordnance will be de-armed per reference (a) and applicable checklist. Hung ordnance will not be downloaded while aircraft engines are turning.

b. Hung ordnance will be downloaded in designated areas.

c. Aircraft squadrons with jammed guns loaded with 20MM ammunition will be taken to the CALA. HERO RESTRICTIONS APPLY.

d. Aircraft returning with forward firing hung ordnance that can not be de-armed/safed per the NAVAIR loading checklist will be shut down in the de-arming area. OIC LANTORDCOM DET Oceana and ESO will be notified and the aircraft downloaded in place.

e. Harpoon/SLAM/SLAM-ER/JSOW weapons utilize an automatic launch sequence. In the event an automatic launch sequence has been initiated and subsequently been aborted prior to weapons separation an ITL situation exist. An ITL weapon will be considered a hung weapon whenever a launched signal has been sent to the weapon and it has then either failed to release or its release has been aborted prior to separation of the weapon from the aircraft.

9-109. Field Carrier Landing Practice (FCLP) Landing/ Touch-And-Go With Ordnance

a. Aircraft with hung ordnance will not conduct touch-and-go landings. All landings will be full stop only.

b. Aircraft with externally carried ordnance should not perform touch-and-go or FCLP training per reference (a).

NOTE: To minimize potential damage to training weapons, dedicated FCLP missions should not be loaded with ordnance.

9-110. Divert/Transient Aircraft

a. The AODO upon notification of an aircraft diverting from another base or ship due to weather or aircraft emergency will notify the radar controller or tower operator. When the tower first makes radio contact, the aircrew will identify the specific type of ordnance on board. Once the type aircraft and type ordnance have been determined, LANTORDCOM DET Oceana and appropriate Type Wing Duty Officer will be notified.

b. When the divert/transient aircraft squadron does not support NAS Oceana with de-arm/download teams, the AODO will direct the aircraft to shut down in one of the de-arm areas specified in Figure 9-1. The aircraft will remain in the de-arm area until de-arming is completed. The pilot in command of divert/transient aircrew may act as a qualified individual for de-arming as approved by their parent command.

c. After de-arming divert/transient aircraft may be parked in the loading area designated in Figure 9-1 depending on the type of ordnance/weapons involved.

d. If downloading of divert/transient aircraft is required and can be conducted by the host squadron/Air Wing the downloading will only be accomplished in the loading/downloading area specified in Figure 9-1. If downloading can not be accomplished the AODO and LANTORDCOM DET Oceana Duty Officer will be notified and a security watch posted by the host squadron/Air Wing to protect the ordnance until the aircraft departs.

e. Servicing of divert/transient aircraft will not be attempted until the aircraft is de-armed. Maintenance on the aircraft will not be performed until the ordnance involved has been downloaded except as authorized section 9-104.

9-111. Dummy Ordnance Displays

a. Reference (a) prohibits the use of any live ordnance for static displays, military or private.

b. Prior to use of an item for static display the item must be inspected by a qualified and certified Explosive Ordnance Disposal (EOD) representative and certified as inert by completion of an inspection tag. ESO will maintain a file of all inert ordnance on board.

c. All ordnance used for static display, including display boards, must have a decal affixed per reference (e).

d. Only EOD or a person certified per reference (e) will determine that items are fully inert. Inert ordnance items received from a manufacturer must be entered in the inert ordnance certification program and appropriate paperwork must be on file with the ESO.

ORDNANCE HANDLING AREAS

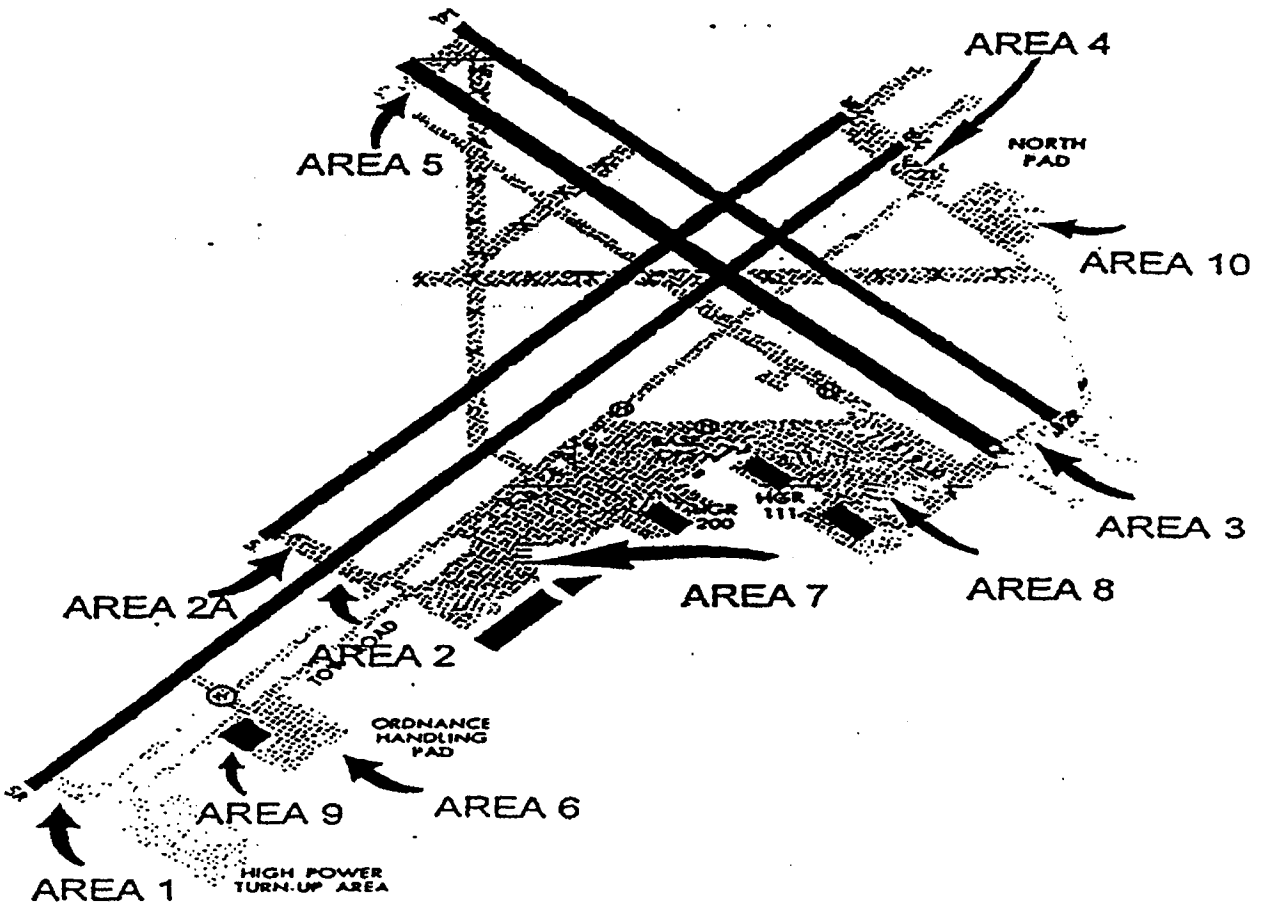

Fig 9-1

Forward Firing Ordnance Arm/Dearm Areas
- Area 1 Abeam approach end runway 5R, heading 230 DEG.
- Area 2 Abeam 8000 ft marker runway 5R, heading 230 DEG.
- Area 2A Abeam approach end of runway 5L, heading 140 DEG.
- Area 3 Abeam approach end runway 32L, heading 140 DEG.
- Area 4 Abeam approach end runway 23L, heading 230 DEG.
- Area 5 Abeam approach end runway 14R, heading 140 DEG.

Freefall Ordnance Arm/Dearm Areas
- Area 2 Abeam 8000 feet marker runway 5R.
- Area 2A Abeam approach end of runway 5L.
- Area 6 Ordnance handling pad.
- Area 7 Flight line loading area.
- Area 8 Flight line loading area.

Emergency Safing/Downloading Areas
- Area 9 Southwest corner of ordnance handling pad, (Jammed Gun Spot).
- Area 10 North Pad, (Special Operations Area).

CHAPTER 10
ORDNANCE REGULATIONS AND PRECAUTIONS

Ref: (a) COMNAVAIRLANTINST 8023.5
(b) OPNAVINST 8000.16A
(c) OPNAVINST 5102.1C
(d) COMNAVREGMIDLANTINST 11015.2A

10-101. Ordnance Regulations

a. The regulations and safety precautions contained in this instruction have been issued to prevent accidents and casualties. Accordingly, all personnel having association with ordnance material or explosives are responsible for complying with the instructions contained herein. Any deviation will result in disciplinary action.

b. OIC LANTORDCOM DET Oceana will chair an Ordnance Safety Committee meeting monthly on the second Wednesday of the month. This meeting will review compliance with this and other applicable ordnance safety instructions. Ordnance, Aircraft Survival Equipmentman and Aviation Structural Mechanic (Safety Equipment) supervisors should attend.

c. OIC LANTORDCOM DET Oceana will be informed of any circumstances that conflict with ordnance safety precautions. When in doubt as to the exact meaning of a safety precaution an interpretation will be requested from OIC LANTORDCOM DET Oceana. Changes, as they may occur, will be issued officially by the NAS Oceana Commanding Officer.

d. There is no purpose in requiring exactness of detail in the preparation, overhaul and assembly of ammunition to ensure its proper functioning unless it is subsequently handled, stored and shipped in such manner to enable it to serve the purpose for which it was intended. Improper handling of ammunition, ammunition components and ammunition details may result not only in malfunction, but also of greater importance, may cause accidents which result in material damage and/or loss of life. Accordingly, all personnel, military and civilian, who are required to move, store, breakout, assemble, test, FUSE, load, arm, dearm or download non-nuclear ordnance must be qualified and certified per references (a) and (b). The history of accidents that have occurred in the use, handling, shipping and storage of ammunition shows that in practically every instance where the cause could be determined, avoidable circumstances existed.

e. Any repeated work no matter how dangerous is likely to become perfunctory and lead to carelessness. Therefore, constant vigilance and intelligent close supervision must be maintained to prevent accidents in operations involving ammunition and explosives.

f. The paramount considerations in handling ammunition and explosives are safety and responsibility; the output of personnel will never be evaluated in a competitive basis.

g. It is difficult to cover every possible emergency that may arise, which, if not properly handled, may have serious consequences. A thorough understanding of all aspects of any safety precaution is essential if personnel are to take the correct action in an unforeseen circumstance. Incorrect or no action in an emergency may be disastrous.

h. During operations involving the handling of ammunition, no one person will be permitted to work alone in a location where assistance from another cannot be given immediately in case of an accident.

i. Any unsafe condition or act in or around magazines or explosive areas will be immediately corrected if possible and promptly reported to LANTORDCOM DET Oceana and ESO.

j. Smoking is prohibited in any magazine, building, vehicle, other conveyance or any area containing explosives or ammunition where operations involving such material are underway and within 200 feet of the vicinity of such operations.

k. Hunting is prohibited in the LANTORDCOM DET Oceana magazine area or within 1,200 feet of the magazine area or within Explosive Safety Quantity Distance, as per reference (d). Restricted area signs are located at arc boundaries.

l. All inert ammunition and components used for training, classroom mockups/static displays or aircraft static displays will be inspected by EOD or a person certified per reference (a) to determine that the item is fully inert.

10-102. Precautions

a. Ordnance will be handled as little as practicable to minimize the risk of fire, explosion and damage.

b. Every precaution will be taken to prevent ammunition or explosives from falling into unauthorized hands.

c. Ordnance material will never be left unattended.

d. The quantity of ammunition located outside of the magazines will be limited to immediate requirements.

e. All weapons will be assembled and tested as set forth in the appropriate NAVAIR or NAVSEA directives.

f. All weapons and other ordnance items will be loaded or installed in embarked aircraft in strict accordance with procedures set forth in current NAVAIR Conventional Weapons Loading Manuals/Checklist. All loading crews will use conventional weapons checklists for loading, arming, de-arming, and downloading of conventional weapons.

g. Anyone who recognizes a hazardous situation will immediately order "STOP THE LOAD/SILENCE." This term will be understood to mean that a dangerous situation exists and that:

(1) All operations will cease immediately.

(2) No further operations will be permitted until the condition prompting the order has been resolved.

h. Per references (b) and (c), defective ordnance items will be reported. Whenever ammunition or explosives are being received, transferred, stored or prepared, the work will be directly supervised by a qualified/certified individual per reference (a). The supervisor will ensure that each individual in his detail is certified for the task to be performed.

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CHAPTER 11
BOMBS

SECTION 1

Ref: (a) NAVAIR 11-140-1

11-101. General. Aircraft bombs are dangerous because of their explosive property and sheer weight. Their explosive property is the greater source of danger. When handling aircraft bombs, safety precautions and procedures of reference (a) will be rigidly followed.

a. Building 2027 is the only authorized assembly area for live bombs/destructors and guided bombs.

b. The quantity of bombs will be kept to a minimum during an operation and the number of personnel present will be kept to the minimum necessary to perform the operation safely.

c. While handling bombs, care will be exercised to prevent damage to the bomb or handling equipment being used. Care will also be taken to minimize shock, blows, friction and accidental dropping or rolling.

d. All bomb handling and assembly will be performed only under the direct supervision of a certified team leader, safety observer and quality assurance representative.

e. The supervisor will be thoroughly familiar with safety regulations, handling procedures and assembly methods, and will at all times observe ordnance safety precautions. They will allow only personnel certified to handle bombs and FUSES to prepare them for loading and fuzing.

f. Stockpiling of bombs is prohibited except at Building 2027 and then only in such quantity as required to meet the immediate scheduled operations. Physical security will be maintained at all times at the Building 2027 to ensure that unauthorized personnel do no have access to the area.

g. As per reference (a) cluster bombs (CBU) must be handled with extreme care since the CBU and internal bomblets contain FUSES.

h. Prior to assembly, bombs must be thoroughly inspected for deformed, rusted or broken parts. The FUSE cavities must be free of dirt, grease or exudate.

i. Steel tools or instruments that may cause sparks will not be used to clean FUSE or booster cavities. Exudate will be cleaned per applicable directives.

j. Bombs will be securely strapped, to handling equipment or trucks prior to movement. Loaded bomb skids/trucks will always be parked with the brakes set and or wheels choked.

k. The surveillance of bomb-type ammunition will be conducted quarterly. The inspection will consist of a visual inspection for evidence of corrosion, defects, exudate or damage. FUSE cavity liners and cavities will also be inspected.

l. Maintenance of bomb-type ammunition will be restricted to renovation of preservatives and will be limited to applying grease or slushing compound to shipping and base plugs or threads.

m. All MK-80 series bombs not using a nose FUSE/booster will be equipped with a support cup and steel-nose plug.

11-102. Practice/Inert Bombs. More accidents occur with practice bombs than any other type of ordnance. Supervisors therefore must ensure that practice bombs are handled with extreme care.

a. MK76/BDU-48 Practice Bombs may be assembled in a safe location on the flight line at least 100 feet from any other hazardous area or hazardous evolution. All unexpended bombs will be unloaded (signals removed) at the end of the daily flight schedule.

(1) Extreme care must be exercised when preparing practice bombs for loading. Under no circumstance will a signal be forced into the bomb cavity/cartridge chambers or detonation may occur. Practice bomb assembly personnel will wear face shields or flight deck goggles during practice bomb assembly/disassembly.

(2) During loading of practice bombs, bombs will be oriented such that the nose/tail end is not pointed at any person or hazardous area.

(3) After assembly, practice bombs may be loaded on aircraft. Installation of signals after aircraft loading is prohibited.

(4) Practice bombs with signal cartridges installed will be stowed in a manner that will prevent any chance of tumbling or dropping. Only authorized/certified personnel will be permitted to handle/load practice bombs.

b. BDU-45 and Inert MK-80 series practice bombs will be delivered to flight line/CALA by LANTORDCOM DET Oceana personnel as an all up round when configured with electric tail FUSE or spotting charge.

11-103. Mines and Destructors

a. Aircraft laid mines and destructors will be handled per safety precautions applicable to bomb type ammunition and loaded per NAVAIR checklists.

b. Mine preparation and tests will be performed by Mobile Mine Assembly Group personnel qualified/certified to handle each particular model.

c. Various mine components are susceptible to electromagnetic radiation, which limits assembly and test to the RADHAZ free environments of the magazine area.

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CHAPTER 11
BOMB FUSES

SECTION 2

Ref: (a) NAVAIR 11-1F-2
(b) NAVAIR 11-75A-17
(c) NAVAIR 11-140-1
(d) NAVAIR 11-5A-17

11-201. General Safety Precautions

a. Per reference (a), FUSES, firing mechanisms, boosters and other ammunition components will not, except as covered by current directives from competent authority, be disassembled, repaired or altered in any way.

b. Steel instruments or tools that may cause sparks will not be used to clean FUSE threads.

c. If a FUSE is dropped, it will be considered unserviceable. Immediately notify chain of command, LANTORDCOM DET Oceana and EOD.

d. If in doubt as to the safe condition of any FUSE, report the circumstances immediately to your chain of command.

e. Under no circumstances will a damaged FUSE be disassembled to determine its condition. All damaged FUSES will be disposed of as directed by EOD.

f. M904 FUSE delay elements must be handled with the greatest care at all times, as they are especially sensitive to heat and shock.

g. In the unlikely event a FUSE becomes armed or partially armed, no attempt will be made to restore it to the safe position. Clear the area and notify chain of command, LANTORDCOM DET Oceana and EOD immediately.

h. Only the quantity of FUSES required to meet the immediate flight schedule will be removed from the shipping containers at any one time.

j. FUSES will not be transported with high explosive bombs or rocket warheads unless the FUSES have been preassembled into the all up round bomb/rocket warheads.

11-202. M904 Series Mechanical Impact Bomb Nose FUSE

a. This FUSE is designed for use with the MK-80 series bombs and may be used concurrently with electrical tail FUSES. The E-4 series is thermally protected. The FUSE provides nine arming time settings from 2-18 seconds in two-second increments. The FUSE provides six functioning times by the selection of different M-9 delay elements. The major safety feature of the M904 is that the explosive firing train is out-of-line until the arming is completed.

b. M904 FUSES will be transported to and from the CALA in the authorized FUSE shipping container.

c. Team members will handle only one FUSE at a time when a fuzing operation is in effect.

11-203. FMU-139-B/B Electrical Tail FUSE

a. Per references (b) and (c), the FMU-139 FUSE is compatible with all MK-80/BLU series bombs and MK 43 target detection device.

b. Emergency Procedures. If the arming wire and other safety devices have been removed from the FUSE, other than during the assembly/disassembly procedures, the FUSE should be considered armed. If the arming wire and safety pin have both been removed for the FMU-139 A/B, the FUSE should be considered unsafe. Notify chain of command, LANTORDCOM DET Oceana and EOD immediately.

11-204. Adapter Boosters. The booster charge will be handled as high explosives. The booster will be inspected for visible damage before installation. Installation or removal will be strictly per references (c) and (d).

CHAPTER 11
PYROTECHNICS/PARACHUTE FLARES/MARINE LOCATION MARKERS AND AIRCREW SURVIVAL EQUIPMENT

SECTION 3

Ref: (a) NAVAIR 11-15-7/SW050-AB-MMA-010

11-301. Pyrotechnics

a. Pyrotechnic devices contain highly combustible chemicals which, when ignited, generate flame, flash, infrared radiation and smoke or display a combination of these effects for a variety of purposes. These purposes include visual and audible signaling, area or target illumination, reference point marking, indication of practice weapons impact or fuzed action, tracking or simulation.

b. Dye-marking devices are included in this section although their display is not a product of combustion. Though the dye composition is spread by explosive means, its end purpose is quite similar to the purpose of true pyrotechnics.

c. Pyrotechnic devices are designed to withstand normal handling. They should, however, be handled as infrequently as possible to reduce the chance of damage that might cause accidental ignition or leakage per reference (a). Many devices contain materials of a dangerous nature and are therefore designed with safety features that must be maintained in good operating condition. Dents, deformations or cracks in the outer body may interfere with the proper function of these safety features or may cause ignition during handling or storage. It is imperative that extreme care be taken to prevent damage to containers or pyrotechnics.

d. Pyrotechnics devices are normally equipped with some type of safety pin, lock or tape that is designed to prevent accidental activation of the initiation mechanism. Such devices must not be tampered with, struck, bent or otherwise damaged or removed until immediately before it is intended to launch the device. Any device that shows signs of damage to safety features will be considered unserviceable and carefully segregated for prompt disposition.

e. Accidental ignition of pyrotechnic devices will result in a fire hazard. In confined spaces, gases generated could present a serious toxic hazard. Devices containing propellant charges that are designed to propel the pyrotechnic candle create an extremely dangerous missile hazard.

f. Many chemicals used in pyrotechnics and dye-marking devices are poisonous to personnel if taken internally. This also applies to the residues for burned pyrotechnics. Although many of the smokes and fumes given off are considered non-toxic and only mildly irritating of the eyes and nasal passages when encountered, heavy concentrations are dangerous and may be lethal if they reduce the amount of oxygen in the air.

g. Pyrotechnic devices characteristically contain their own oxidants and therefore do not depend on atmospheric oxygen for combustion. For this reason, the exclusion of air is usually ineffective as a means of controlling a pyrotechnic fire. Many pyrotechnic mixtures, particularly illuminating flare compositions, burn with intense heat (up to 4500 degrees F). Carbon dioxide extinguishers are ineffective and in addition are a potential source of danger in that they tend to produce oxygen that supports combustion. Foam type extinguishers are equally ineffective as they work on the exclusion of air principle. Fire fighting tests have established that properly controlled and directed water is the best fire-extinguishing agent for aircraft flares.

h. Pyrotechnic pistols and projectors require the same care and precautions during loading, firing, and unloading as small arms except they may not be carried in a loaded condition. A pyrotechnic pistol is cocked as long as the breach is closed. If pyrotechnic pistol or projector is loaded and not fired, it will be unloaded immediately since, both are not equipped with positive safety features.

i. Pyrotechnics will be stored in designated pyrotechnic magazines. They will be stored in the original box or watertight container in which received.

11-302.

a. Aircraft Parachute Flares, LUU-2

(1) Flares are illuminating devices that contain powdered magnesium mixed with an oxidizer. Flares will be stored fully packaged, as received in primary magazines.

(2) The number of flares removed from magazine storage will not exceed the amount required for the mission.

(3) The only authorized location for opening flare-shipping containers is in Building 2020. After an inspection of the LUU-2, squadron personnel are authorized to build and disassemble LUU-2 at the CALA or LINE. LUU-2s

are NOT authorized to be stored in the flightline RSL due to compatibility requirements. CALA RSL may be temporary signed out for temp stowage of LUU-2.

(4) Flares that are in many ways prepared for use and not launched will not be returned to the magazine until they are safed and packaged per reference (a).

(5) If the safe condition of a flare cannot be positively verified, notify chain of command, LANTORDCOM DET Oceana and EOD immediately. These flares will not be returned to storage until their condition is positively determined.

(6) Flare dispensers will be loaded/downloaded with parachute flares in strict accordance with applicable directives. Dispensers that have been loaded with flares in preparation for launch or downloaded from aircraft and still containing all or some of the flares will be returned to the magazine area. The flares may then be removed per the applicable NAVAIR publication, safed and returned to the magazine or Ready Service Magazine.

(7) If at any time during LUU-2 preparation the timer is accidentally activated, place hand over timer to prevent the timer from falling off when it releases. After release, hold the timer and cut the cord connecting the timer assembly to the parachute package and remove spring and timer. Tape the end of the flare to retain parachute pack. Discard spring and timer. Notify chain of command, LANTORDCOM DET Oceana and EOD personnel to dispose of the flare.

b. MK 58 Marine Location Marker

(1) This marker is designed for day or night use. It produces a yellow flame with smoke for a period of 40 to 60 minutes. The marker contains two phosphorous pyrotechnic candles that are ignited electrically by a salt-water activated battery upon water entry. The MK 58 marker can be launched by hand which requires the tear strip and tape covering the battery cavity surface be removed prior to launching, or it can be launched from aircraft per the applicable aircraft loading manual.

(2) Prior to use, always inspect each round for dents, punctures, and other damage, reject the MK 58 for any detectable external damage.

(3) Use care when removing the tear strip to avoid cutting hands.

(4) Ensure that only break away suspension bands (NALC LW02) are used for aircraft loading. The added weight of permanent bands will sink the marker rendering it useless.

(5) Always ensure that the tear strip is undisturbed and covered with tape and that the case is not cracked or punctured before returning to storage.

(6) After removal of the tape covering the battery cavity well, the marker must be segregated and maintained completely dry until disposal.

(7) MK 58 Marine Markers will be prepared for launch in strict compliance with reference (a) and applicable Naval Air (NAVAIR) loading checklists.

c. MK 25 Marine Location Markers

WARNING: THIS DEVICE WILL NOT BE USED IF THE PHOSPHORUS WARNING LABEL IS NOT ATTACHED TO THE DEVICE.

(1) Marine Location Marker MK 25 Mods will be handled and stored per the general provisions set forth in Section 1-6 of Chapter 1 of this instruction . This device is a hermetically sealed unit so long as the base plugs (one or both) have not been pushed in. If a marker is prepared for launching (base plug(s) pushed in), and the order to launch is rescinded, special handling and storage procedures are necessary.

(2) Dented, corroded, cracked, ruptured or otherwise damaged MK 25 Marine Location Markers will not be used. Instead, they will be carefully segregated from all other pyrotechnics and munitions pending disposition per the provisions in reference (a).

d. Aircrew Survival Equipment (MK 79 and MK 124 Signal Flare Kits)

WARNING: DO NOT POINT THE PROJECTOR TOWARD THE FACE OR BODY OF THE USER OR OTHER PERSONNEL.

(1) If there is smoke and flames, briefly immerse it in water or hold it against a solid object.

(2) These devices should be stored in a dry, well ventilated location and shielded from direct rays of the sun.. This device will be handled and stored per reference (a).

CHAPTER 11
ROCKET/CATAPULT/MOTORS, CARTRIDGES AND CARTRIDGE ACTUATED DEVICES

SECTION 4
CADS AND AEPS

Ref: (a) NAVAIR 11-100-1
(b) HERO Manual

11-401. Description. Rocket catapults/motors, cartridges and cartridge-actuated devices are items used in ordnance delivery systems and aircraft escape systems. Shape, size and explosive charges vary, ranging from large rocket catapults to tiny impulse cartridges. Specific information and handling procedures are contained in reference (a); for Rocket Catapult/Motors for Escape Systems Manual and cartridges and cartridge activated devices, refer to reference (b) for HERO restrictions.

11-402. General Safety Precautions

a. All applicable personnel must ensure rocket catapults/motors, cartridges and cartridge actuated devices are properly handled and installed to prevent any chance of malfunction. Malfunction or failure to fire in an emergency can result in severe injury or death to the aircrew.

b. Do not disassemble, make any adjustment to, or attempt to repair or rework the rocket catapult/motor.

c. If the rocket catapult/motor or loaded catapult/motor container is dropped or shows evidence of rough handling, dispose of the unit per current directives.

d. Any visible defect is a critical defect. Do not use the unit if any damage or defect is noted.

e. It is mandatory that a red tag (loaded explosive) is present on the rocket catapult/motor during handling and storage.

f. Air or gas pressure must not be applied to inlet ports of certain rocket catapults due to their activation by gas pressure. Such catapults will have their inlet ports closed with shipping caps when not installed in an aircraft.

g. Ejection seats and their associated explosive components, including rocket catapults removed from aircraft, may be stored in the squadron AME shop if they remain under the constant surveillance of a qualified and

certified AME. Warning: All flame and spark producing devices will be removed from the shop and fire extinguishers immediately available. Smoking is prohibited. Explosive components will be stowed in a container that is painted red and stenciled class B or C explosives as appropriate.

h. Ejection seats/aircraft escape system explosive components removed from the aircraft that will be reinstalled within eight hours will be stored in the appropriate portable magazine or ready service locker, not to exceed 72 hours per reference (a).

i. Electrically initiated cartridges will be kept away from stray voltages.

j. If a cartridge is removed from a device for inspection or safety reasons, it should be marked for identification so it can be reinstalled in the same device from which it was removed.

k. The inlet or outlet ports, if present, on cartridge activated devices, will be closed with a shipping cap or plug when the device is not installed. No cartridge/cartridge-actuated device will be installed in equipment for which it is not designed. Many cartridges and cartridge-actuated devices have the same dimensions and are physically interchangeable. Utmost care will betaken to identify each cartridge-actuated device to ensure that the proper item is installed in the device/aircraft for which it was designed.

l. When hermetically sealed containers of cartridges are opened, the cartridge expiration date will be marked with indelible ink on the case of each cartridge in the can as follows: Service Life Expires (month/year).

m. Personnel handling cartridges, cartridge actuated devices, rocket catapults and motors will be certified and thoroughly familiar with specific safety precautions, warnings, cautions and notes applicable to the device being handled.

n. Squadrons will not requisition cartridge-actuated devices, catapults and motors in quantities exceeding actual requirements. Normal requirements will be delivered no earlier than two hours before installation unless ready service magazine stowage is available.

o. When rocket catapults and aircraft installed CADs are requisitioned, the removed item will be returned concurrently with receipt of the new item. Before turn-in to the magazine area of the item, the DD 1348-1A turn-in document will be delivered to LANTORDCOM DET Oceana Ammunition Accounting Office, Building 2005, for review for proper content.

CHAPTER 12
EOD
RESPONSIBILITIES AND PROCEDURES FOR OBTAINING EOD SERVICES

Ref: (a) OPNAVINST 8027.6E
(b) OPNAVINST 3440.15A

12-101. General. References (a) and (b), state EOD is responsible for the disposition of explosive ordnance at Navy and Marine Corps installations or in the physical possession of the Navy and Marine Corps at the time of any accident; in any enclosed bodies of water, rivers and canals and within the ocean's and contiguous waters, up to the high water mark of the seacoasts, inlets, bays and harbors. EOD detachments fall under the operational control of EOD Mobile Unit TWO.

12-102. Action Required. In the event of an aircraft, vehicular, handling equipment, handling mishap or crash involving explosive ordnance or an explosive operated device where there is a question as to the safety of that device, the following action will be taken:

a. The senior officer, chief petty officer or petty officer at the scene will take such action as necessary to clear the immediate area of unnecessary personnel and equipment.

b. If time permits, the area should be cordoned off and warning signs posted. A sufficient number of guards should be posted to establish control of the area. Guards should be located at a safe distance from the object (i.e., 300 yards behind adequate cover is sufficient protection for a 500 pound charge).

12-103. During and After Normal Working Hours. The unit/squadron reporting the incident will notify the Explosive Ordnance Disposal team and LANTORDCOM DET Oceana. EOD may be contacted at (757) 462-4444 (EMERGENCY) or (757) 462-1470/71 (ROUTINE).

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CHAPTER 13
WEAPONS SAFETY INCOMING BRIEF OUTLINE

Ref: (a) OPNAVINST 8000.16A

13-101. Background. History has proven that the constant shifting from sea to shore stations becomes a burden on transient commands to keep abreast of the changes to ordnance handling requirements. To ease this transition between operational environments, LANTORDCOM DET Oceana has developed a weapons safety brief for all squadrons and incoming transient commands.

13-102. Requirements

a. All transient commands that are assigned temporary additional duty to NAS Oceana are required to attend a weapons safety brief before commencing any explosive operation.

b. No ammunition transactions from LANTORDCOM DET Oceana will be conducted until the safety brief has been completed.

c. Transient command briefs will be given in LANTORDCOM DET Oceana, Building 2005, Conference Room.

d. Call LANTORDCOM DET Oceana at 433-2248, between 0700-1530, to schedule in briefs.

e. Personnel required too attend safety brief:

(1) Ordnance Branch/Department Officer

(2) All Aviation Ordnancemen used during detachment

(3) All ordnance augmentation members used during detachment

13-103. Areas of interest to be covered

a. NAS Oceana Standard Operating Procedures.

b. NAS Oceana Ordnance Operations Manual 8000.1.

c. Requisitioning Procedures. Requires authorization letter signed by the Commanding Officer for RSLs and requisitions.

(1) Turn-in

(2) Geographical hosting procedures

(3) CADS/PADS

(4) Small Arms

(5) Assembled ordnance items

d. Ready Service Locker Inspection. Check in/out procedures.

e. Portable Ready Service Locker. Check in/out procedures.

f. Fuel Pit Requirements.

g. Explosive Driver Requirements.

h. Transportation of Explosives.

i. Authorized Handling Areas.

(1) Loading/Downloading

(2) Arming/De-arming

j. 20MM/Chaff Buildup Areas.

k. Bomb-build up area procedures.

l. HERO requirements.

m. Pistol Range Requirements.

n. Aviation Weapons Support Equipment. Check in/out procedures.

o. Weather conditions.

p. Qualifications/Certification Verification.

APPENDIX A

Terms, Definitions, Abbreviations and Acronyms

1. Airborne Stores. Items intended for carriage internally or externally by aircraft, including racks, launchers, adapters, and detachable pylons, which are not normally separated from the aircraft in flight, such as tanks, pods, guns, non-expendable training weapons, targets and Electronic Counter Measure pods.

2. Airborne Weapons. Items intended for carriage internally or externally by aircraft, which are normally separated from the aircraft in flight, such as other stores authorized for release in the NATOPS Manual.

3. Air Operations. A section of the Air Operations Department that is responsible for coordinating all matters pertaining to flight operations, including the proper function of Air Traffic Control/Radar Air Traffic Control Center.

4. AEPS. This term collectively represents rocket catapults and rocket motors utilized in aircrew/escape propulsion systems.

5. Aircraft Parking Area/Ramp. Any area set-aside for parking aircraft that does not normally contain explosives.

6. Ammunition. A contrivance charge with explosives, propellants, pyrotechnics, initiation composition or chemical material for use in connection with defense or offense including demolition, training, ceremonial or non-operational purposes.

7. Ammunition and Explosives. Includes, but is not necessarily limited to, all items of ammunition, propellants (liquid and solid), high and low explosives; guided missiles, warheads, devices, pyrotechnics, chemical agents, components thereof, and substances associated therewith presenting real or potential hazards to life and property.

8. Ammunition and Explosive Aircraft Cargo Area. An area specifically designated for:

a. Aircraft loading or unloading of transportation configured ammunition and explosives.

b. Parking aircraft loaded with transportation configured ammunition and explosives.

9. Ammunition and Explosives Area. An area specifically designated and set aside from other portions of an installation for the development, manufacture, testing, maintenance, storage or handling of ammunition and explosives.

10. Ammunition Components. Integral units which are part of a complete round of ammunition. Ammunition components may consist of either inert or explosive loaded parts or both.

11. Ammunition Lot. A quantity of ammunition which has been assembled from uniform components under similar conditions and which is expected to function in a uniform manner. Each ammunition lot is assigned a number.

12. Ammunition Lot Number. The code number that identifies a particular ammunition lot.

13. Arming. An operation in which a weapon is changed from a safe condition to a state of readiness for initiation.

14. Arming Area. That designated area in which a weapon is armed or changed from a safe condition to a state of readiness for firing or initiation.

15. Aviation Ordnance Evolution. An ordnance evolution requiring the breakout, buildup, and staging of explosive ordnance and the loading, arming, launching, recovery and de-arming of ordnance carrying aircraft.

16. Bingo. A carrier-based aircraft on an emergency divert to a shore station.

17. Bomb Type Ammunition. Ammunition that is characterized by a large high-explosive charge-to-weight ratio, such as aircraft bombs, warheads, guided missiles, depth charges and mines that are designed for dropping, launching or planting. This type of ammunition depends on the destructive blast effect of the explosive at or near the target greater than the penetration effect of the explosive container.

18. CADs. This term collectively represents and is synonymous with cartridges, cartridge actuated devices (old meaning), aircraft detonation cords and cartridge associated hardware. (Refer to definition of cartridge actuated devices).

19. Cartridge. A complete round of ammunition in which the primer, propelling charge, and the projectile or bullet are completely assembled to the cartridge case as fixed ammunition; or the primer and the propelling charge are assembled in the cartridge case and closed by a firable plug.

20. Cartridge Actuate Devices. Explosive loaded devices designed to act as a gas generator, or to provide a stroking action or a special purpose action. Activated devices may be reusable, employing and expendable cartridge for each design action or may be a sealed unit with a one-time function capability. The amount of explosive contained in these devices is normally small.

21. Combat Aircraft Loading/Parking Area. Any area specifically designated for:

a. Aircraft loading or unloading of combat configured ammunitions.

b. Parking aircraft loaded with combat configured ammunitions.

22. Compatibility. A relationship between different items of ammunition, explosives, or other hazardous materials with characteristics such that a quantity of two or more of the items stored or transported together is not significantly more hazardous than a compatible quantity of any one of the items stored or transported alone.

23. Container. A general term that encompasses boxed, cartridges or powders, tanks, cartons, drums, barrels, cylinders, or cans; containers for long ordnance items; and cargo containers (dromedaries, etc.) for shipment of sizable quantities of hazardous materials. A pallet is not considered to be a container.

24. Cook-Off. The deflagration or detonation of ammunition caused by the absorption of heat from its environment. In loaded guns it consists of the accidental and spontaneous discharge of, or explosion in, the gun caused by an overheated chamber or barrel igniting a FUSE, propellant charge or bursting charge. Cook-off may also occur in explosive loaded component when they are exposed to excessive heat or flame wash from any source, such as live steam, fire, rocket or gas turbine exhaust.

25. De-arming (safing). An operation in which a weapon is change from a state of readiness for initiation to a safe condition.

26. De-arming Area. That designated area in which a weapon is de-armed and/or safed.

27. Display Ammunition. Inert ammunition items and components that are used in displayed boards, exhibits, demonstrations, public functions, or that are kept as engineering models, souvenirs, mementos or for decorative purposes.

28. Department of Transportation Class. A category of materials classified by DOT based on the character and predominance of the associated hazards and of the potential for causing personnel casualties or property damage. The hazard classes are Explosives A, B and C; blasting agent; flammable liquid; flammable solid; corrosive material; poisons A and B; irritating material; radioactive material; etiologic agent; Orm-A, Orm-B, Orm-C and Orm-D.

29. Downloading. An operation that removes airborne weapons/stores from an aircraft.

30. Drill Ordnance. Actual life size ammunition items with working mechanisms used for training exercises, but having no explosive materials.

31. Explosion Hazard. The hazard resulting from the tendency of certain materials to detonate en masse or burn with violence, causing destruction and damage or propagating explosions from one explosive site to another by blast wave or flying fragments.

32. Explosive Hazard Class. For universal identification of hazardous material, the United Nations Organization has established nine classes, of which Class 1 is designated for ammunition and explosives, DoT Classes A, B and C. Within Class 1, the material is further subdivided into four separate and distinct divisions:

Class 1	
Division 1	Mass detonating
Division 2	Non-mass detonating-fragment producing
Division 3	Mass fire
Division 4	Moderate fire, no blast

33. Explosive Incident. See Explosive Mishap.

34. Explosive Limit. The maximum quantity of explosives or ammunition permitted in a magazine, production Building, or other specified site. Explosive limits are based on quantity-distance damage considerations and are expressed in net pounds of explosive, number of rounds or units, or other measuring units. Also called Explosive Quantity.

35. Explosive Mishap. Includes all of the following occurrences, near-occurrences, and/or circumstances:

a. Chemical Agent Accident. Any occurrence involving a chemical agent which, in the opinion of a medically trained authority, did result in a disabling injury or, did or will result in 10,000 dollars or more damage to property from contamination.

b. Dangerous Defect. A defect on visual examination or local test in an explosive material/system which is capable of resulting in an explosive mishap; e.g., ruptures of explosive containers exposing filler, protruding primers, partially armed FUSES, safety devices missing or defective, etc.

c. Explosive Accident. An unplanned explosion or fire involving an explosive material/system. This includes inadvertent actuation, jettisoning, release, or launching

thereof resulting in a fatality or injury to personnel, fire explosion, or damage to property.

d. Explosive Incident. An occurrence which creates a potentially hazardous situation. Incidents include, but are not necessarily limited to:

(1) Human errors in processing, assembly, testing, loading, storing, transporting, handling, using, or disposal of an explosive material or system.

(2) Unusual or unexpected occurrences, unnatural phenomena, unfavorable environments or instances of equipment failure which may damage or affect safety or reliability of an explosive material/system.

(3) Loss or abandonment of an explosive material/system resulting in a potential hazard to untrained personnel who may find the item.

(4) Misuse or unauthorized alterations of an explosive material/system.

(5) Any failure or malfunction of, or damage to, a launch device or associated hardware which occurs when an explosive material/system is being handled or otherwise manipulated.

e. Malfunction. The term applied to an explosive material/system when it fails to function in the manner for which designed. Malfunctions are considered major or minor as follows:

(1) Major Malfunction. Failure to function in the manner for which designed resulting in, or potentially capable of resulting in, personal injury and/or material damage.

(2) Minor Malfunction. Failure to function in the manner for which designed and does not result in injury or material damage is remote (duds, downrange premature activation, etc.).

f. Explosive Near-Mishap. Any event which, except for chance, would have been an explosive mishap.

36. Explosive Area. Any area of a shore establishment in which explosives or ammunition are manufactured, stored, processed or otherwise handled.

37. Explosive Ordnance. Bombs and warheads, guided missiles, artillery, mortar, rocket and small arms ammunition, all mines, torpedoes, depth charges, demolition charges, pyrotechnics, clusters and dispensers, cartridge and propellant actuated devices, and all similar or related items or components, explosive in nature, which may cause injury or death to personnel or damage to material. This definition includes all munitions containing explosives, propellants, nuclear fission, fusion or radiological materials and chemical or biological agents.

38. Exposed Explosives. Explosives that are actually visible (such as unpackaged build explosives, disassembled or open components) and that also are susceptible to initiation directly by static or mechanical spark, or those that create (or accidentally create) explosive dust or give off vapors, fumes or gases in explosive concentrations.

39. EOD Incident. The suspected or detected presence of explosive ordnance which constitutes a hazard to operations, installation, personnel or material.

40. EOD Procedure. Any particular course or mode of action taken by qualified EOD personnel to render safe, disassemble, neutralize, or dispose of explosive ordnance items to preclude a detonation or munitions function.

41. Improvised Explosive Devices. Those devices placed or fabricated in an improvised manner incorporating explosives or destructive, lethal, noxious, pyrotechnic or incendiary chemicals, designed to destroy, disfigure, distract or harass.

42. Flammable Liquid. Any liquid having a flash point below 100 degrees Fahrenheit and a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100 degrees Fahrenheit and any liquid of lesser hazard when artificially heated or atomized so as to increase the ignition hazard.

43. Guided Missile. An unmanned vehicle designed as a weapon that travels above the surface of the earth along a course or trajectory that can be altered by an automatic or remotely controlled mechanism within the vehicle itself. The missile normally is destroyed in carrying out its mission.

44. Hangfire. A brief undesirable delay in the functioning of an ammunition item after initiating action is taken. Usually refers to delay in ignition of a propelling charge in a gun, missile motor, or rocket launcher.

45. Hazard. Any condition which may cause an accident or contribute to the severity of an accident. For purposes of classification, four general types of hazards are recognized in connection with ammunition and explosives. These are mass-explosion hazard, mass fire hazard, non-mass-detonating (fragmenting) hazard and moderate fire, no blast hazard.

46. HERO EMCON. Control of all electromagnetic radiation and emitters, including electronic communications and radar to protect ordnance containing EED. During HERO conditions, no electronic emitting device within the designated bands will be operated without the permission of the Commanding Officer.

47. HERO SAFE Ordnance. Any ordnance item that is sufficiently shielded or otherwise so protected that all EED/CAD contained by the item are immune to adverse effects (safety or reliability) when the item is employed in its expected RF environments, provided the general HERO requirements are observed.

48. HERO SUSCEPTIBLE Ordnance System. Any ordnance system proved (by test) to contain EED/CAD that can be adversely affected by RF energy to the point that the safety and/or reliability of the system is in jeopardy when the system is employed in expected RF environments.

49. HERO UNSAFE Ordnance. Any ordnance item is defined as being HERO UNSAFE when its internal wiring is physically exposed; when tests are being conducted on the item that result in additional electrical connections to the item; when EEDs/CADs having exposed wire leads are present, when the item is in a disassembled condition. Ordnance items that fall into the above classification may be exempted from being classified as HERO UNSAFE ordnance as the result of HERO test conducted to determine specific susceptibility.

50. Hung Weapons. Airborne weapons which cannot be fired or dropped because of weapon, rack or circuit malfunction and one or more attempts have been made to fire or drop the weapons.

51. Hypergolic. Term applied to the self-ignition of a fuel and an oxidized upon mixing with each other without a spark or other external aid.

52. Inert/Dummy Ammunition. An ammunition item or component(s) whose explosive material has been replaced by inert material, but may contain a small amount of tracer material.

53. Inert/AEPS/CADS. A certified condition of an AEPS or CAD thereof, which contains no explosive, pyrotechnic or chemical agent as determined by an EOD inspector.

54. Inert Components. The parts of ammunition which do not contain explosives, active chemicals or pyrotechnics.

55. Inert Material. Material that contains no explosives, active chemicals or pyrotechnics.

56. Inhabited Building. A building or structure, other than an explosive operating building used, in whole or in part, as a habitation or place of assembly by human beings.

57. Inhabited Building Distance. The minimum distance permitted between an inhabited building and an ammunition or explosives location for protection of administration, quarter, industrial, and other similar areas within a naval shore establishment. Inhabited building distance will be provided between ammunition or explosives locations and the boundary of ashore establishment or the nearest point beyond the boundary where such inhabited buildings could be erected.

58. Loading (re-arming). An operation that installs airborne weapons and stores on or in an aircraft and may include fuzing of bombs and stray voltage checks.

59. Loading/Downloading Area. That designated area in which replenishment of airborne weapons or stores and other armament items on or in an aircraft is conducted.

60. Loading Area (cargo). A designated area for loading or offloading explosives from cargo aircraft.

61. Magazine. A structure designed and specifically designated for the storage of explosives, ammunition or explosive loaded components.

62. Magazine Area. The area on shore bases surrounding a magazine or group of magazines. The term is used to denote the areas adjoining or surrounding explosive storage where freedom of action is restricted in the interests of safety.

63. Misfire. Failure of an item of ammunition to fire after initiating action has been taken.

64. Ordnance. Military material such as combat weapons of all kinds with ammunition and equipment required for their use. Ordnance includes all the things that make up a ship's or aircraft's armament i.e. guns, ammunition, and all equipment needed to control, operate and support the weapons.

65. Practice/Training Ammunition. An ammunition item conforming to the configuration of the service item. There may

be a modification of a service (tactical) item or be designed specifically for practice. It is used in training associated with firing, launching, flying, repositioning or dropping operations. It may contain an explosive and/or propellant. Practice ammunition may either be expendable or recoverable depending upon the device involved.

66. Propellant. That which provides the energy required for propelling a projectile. Specifically, an explosive charge for propelling a bullet, shell, or the like; also a fuel, either solid or liquid, for propelling a rocket or missile.

67. Pyrotechnics. Ammunition containing compositions designed to produce illumination, or colored lights and smokes for marking or signaling, or incendiary effects or smoke screens, or military fire- works. Pyrotechnic compositions are mixtures of oxidizing materials and other ingredients such as binders and coloring agents.

68. Quantity-Distance. The quantity of explosives material and distance separation relationships which provide defined types of protection. These relationships are based on levels of risk considered acceptable for the stipulated exposures and are tabulated in the appropriate quantity-distance tables. Distances greater than those shown in the tables should be used wherever practicable.

69. Ready Service Magazine. A standard magazine located in the magazine area (or near the weapons or area to be served aboard the station) and used for the temporary storage or restricted amounts of ammunition for emergency use; or in an operating line for limited amounts of explosives or components used in the production of ammunition.

70. Rocket. A missile which derives its thrust from ejection of hot gases generated from propellants carried in the missile motor.

71. Rocket Engine. Self-contained rocket propulsion unit containing an oxidized and a fuel, each separated by an aluminum or stainless steel wall, and utilizing liquid rather than solid propellant material.

72. Rocket Motor. That portion of the rocket loaded with a propellant.

73. Rocket Warhead. That portion of the rocket loaded with high explosives, chemicals, pyrotechnics or inert material.

74. Safe Working Load. The maximum weight in pounds which should be lifted by handling equipment such as cranes, slings, forklift trucks, beams, and similar handling equipment. The safe working load will be marked on the lifting equipment.

75. Service Magazine. A building of an operating line used for the intermediate storage of explosive materials.

76. Small Arms Ammunition. Ammunition for small arms, i.e., all ammunition up to and including .50 caliber, and all gauges of shotgun shells. Also includes 14.5MM and 20MM ammunition which does not have high explosive or incendiary loaded projectiles.

77. Supervisor. Any employee, officer or petty Officer designated by the Commanding Officer, Ordnance Officer or other department head to oversee and inspect personnel and employees and their operations.

78. Support Facilities. Ammunition and explosives storage or operations which solely support the function or tactical using units as distinguished for storage depots or manufacturing facilities.

79. Training Evolution. An event conducted at the command, or unit level to attain technical or administrative proficiency of personnel in the maintenance, handling, preparation or use of explosives ordnance items, components and associated test, handling and production equipment.

80. Unexpended Weapons. Airborne weapons/stores that have not been subjected to attempts to fire or drop. They are presumed to be in normal operation condition and can be fired or jettisoned if necessary.

81. Unserviceable Ammunition. Ammunition reclassified to unserviceable because of a change in expected service or shelf life, or due to deterioration or damage. Unserviceable ammunition is identified by:

a. NAVSEA through issue of NAR and TW025-AA-ORD-010 (Formerly OD 17190), "Ammunition Unserviceable, Suspended and Limited Use as:

b. Inspection which may reveal defective ammunition such

(1) Improper seating of FUSE in rocket warheads.

(2) Warheads, which are cracked, dented, bent, and with recesses which are corroded.

(3) Ruptured missile seeker heads.

(4) Dented or deformed pyrotechnics.

(5) Leaking chemical ammunition.

(6) Exudate or other leakage from ammunition items.

c. Reports of ammunition or components dropped five feet or more (two feet for rockets/rocket motors or missiles/missile motors).

82. Warhead. That part of a missile, projectile, torpedo, rocket or other munitions which contains either the nuclear or thermonuclear system, high-explosive system, chemical agents or inert materials intended to inflict damage. Rocket-assisted projectiles and rocket warheads without motors are designated as warheads.

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APPENDIX B

Technical publications and directives

NAVAIR DIRECTIVES

NAVAIR 00-80R-19	USN Fire Fighting and Rescue Manual
NAVAIR 00-80T-103	NATOPS Conventional Weapons Handling Procedures Manual (ASHORE)
NAVAIR 01-700	Airborne Weapons Stores Publication Index (Issued Quarterly)
NAVAIR O1-AIM9-2	MIM AIM-9 Series Sidewinder
NAVAIR 01-AIM54-2-3	MIM AIM-54A Phoenix
NAVAIR 01-265GMAD-9-3.12	MIM AIM-7 Series Sparrow
NAVAIR 01-AGM84A-2-1	MIM AGM-84 Harpoon
NAVAIR 01-1SMGC-1	Laser Guided Bomb (LGB-1)
NAVAIR 01-1SMGD-1	Laser Guided Bomb (LGB-2) GBU-12B/B
NAVAIR 11-1-113	Safety Precautions for Liquid Fuel
NAVAIR 11-116B	Navy Ammunition Logistic Codes (also issued as TW010-AA-ORD-030)
NAVAIR 11-1F-2	Airborne Bomb and Rocket FUSE Manual
NAVAIR 11-5A-17	Bombs and Associated Components
NAVAIR 11-5-581	Aero 9c Adapter Aero 8/B-9B-18/A
NAVAIR 11-15-7	Pyrotechnic Screening and Marking Devices
NAVAIR 11-75A-61	LAU-68 Rocket Dispenser
NAVAIR 11-85-1	Rocket Catapults
NAVAIR 11-85-5	Airborne Rockets
NAVAIR 11-95M61A1-2	M61Al Gun System
NAVAIR 11-100-1	Cartridge and Cartridge Actuated Devices
NAVAIR 11-120A-1.1	Weapons Packaging, Handling, Stowage
NAVAIR 11-120A-1.2	Weapons Packaging, Handling, Stowage
NAVAIR 11-140-1	Rapid Rearm Manual
NAVAIR 11-140-5	Bomb Assembly Manual (MK-80 Series)
NAVAIR 16-1-529	RADHAZ HERO Manual (also issued as OP 3565
NAVAIR 19-15BC-10	Aero 39 Bomb Skid Adapter
NAVAIR 19-1SBC-12	Aero 12C Weapons Skid
NAVAIR 19-25E-66	Aero 191 Weapons Skid
NAVAIR 19-1SBC-18	A/M32K5 Munitions Trailer w/Adapters
NAVAIR 19-1SBC-505	Aero 21 Weapons Skid
NAVAIR 19-25- 33	MHU Universal Cradles
NAVAIR 19-25E-51	Aero 51 Weapons Trailer
NAVAIR 19-25E-61	MHU-126 Weapons Trailer
NAVAIR 19-25E-63	MHU-151/M Munitions Trailer
NAVAIR 19-95-3	Weapons Handling Equipment Configuration Guide
NAVAIR 19-100-2	Approved Ordnance Handling Equipment
NAVAIR 19-600-63-6-1/-9	PMS/Preop Aero 51 Weapons Trailer
NAVAIR 19-600-86-6-2	PMS A/S 32J-1A/B Loader w/Adapters

NAVAIR 19-600-226-6-1/2	PMS/Preop Aero 191 Skid w/Adapters
NAVAIR 19-600-96-6-1/-4	PMS/Preop Aero 12C Skid w/Adapters
NAVAIR 19-600-97-6-1/-4	PMS/Preop Aero 16B Skid w/Adapters
NAVAIR 19-600-101-6-1/-4	PMS/Preop MK-7 Bomb Trailer
NAVAIR 19-600-145-6-1/-2	PMS/Preop Munitions Set A/M32K-5
NAVAIR 19-600-148-6-1/-2	PMS/Preop LALS
NAVAIR 19-600-162-6-1/-2	PMS/Preop MHU-126 Bomb Trailer
NAVAIR 19-600-169-6-1/-2	PMS/Preop Aero 61 Sling
NAVAIR 19-600-185-6-1/-2	PMS/Preop MHU-151/M Bomb Trailer
NAVAIR 19-600-186-6-1	PMS/Preop A/532A-30 Tow Tractor
NAVAIR 19-600-189-6-1	PMS/Preop MHU-171/E Trailer
NAVAIRINST 9460.1	Series Policy and Procedures for Air Launched Missile Repairable Material Movement

1-302. NAVSEA DIRECTIVES

NAVSEA OP-5 Vol 1 and 2	Ammunition and Explosives Ashore Regulations for Handling, Storing, Production, Renovation and Shipping
NAVSEA OP-1014	Ordnance Safety Precautions Their Origin and Necessity
NAVSEA OP-2173 Vol 1 and 2	Catalog of Ordnance Handling Equipment
NAVSEA OP-2165 Vol 1 and 2	Navy Transportation Safety Handbook
NAVSEA OP-2217	Miscellaneous Chemical Munitions (NAVSEA SW073-AC MMA-010)
NAVSEA OP-2238	Identification of Ammunition
NAVSEA OP-2239	Explosive Driver's Handbook
NAVSEA OP-2793	Toxic Hazards of Pyrotechnics
NAVSEA OP-3199 Vol 1 and 2	Safety Precautions for Liquid Propellants
NAVSEA OP-3347	USN Ordnance Safety Precautions
NAVAIR 16-1-529	HERO Manual
NAVSEA OP-4098	Handling Ammunition with MHE
NAVSEA OP-4461	On-Station Transportation of Ammunition
NAVSEA QAP 100	Quality Assurance Procedures for Fleet Activities
NAVSEA SG420-AP-MMA-010	Testing of Ordnance Handling
TWO10-AA-ORD-030	Navy Ammunition Logistics Code
TWO10-AA-ORD-010	Ammunition Unserviceable, Suspended, and Limited use
NAVSEAINST 4570.1A	Demolition and Disposal of Ammunition
NAVSEAINST 8370.2A	Small Arms and Weapons Management Policy and Guidance Manual

1-303. OPNAV DIRECTIVES

OPNAVINST 3100.6G	Special Incident Reporting (OPREF 3) Procedures
OPNAVINST 3591.1C	Small Arms Training and Qualifications
OPNAVINST 4790.2H	Naval Aviation Maintenance
OPNAVINST 5100.23F	Naval Occupational Safety and Health Program Manual
OPNAVINST 5102.1C	Accident, Investigation and Reporting
OPNAVINST 5530.13B	DON Physical Security for Sensitive Arms, Ammunition, Explosives
OPNAVINST 5530.14C	Physical Security Manual
OPNAVINST 8020.14	USN Explosive Safety Policies, Requirements and Procedures
OPNAVINST 8000.16A	Naval Aviation Weapons Maintenance Program

1-304 FLTCOM DIRECTIVES

COMLANTFLTINST 8010.4	Series Fleet Ammunition Requisitioning Guide
COMLANTFLTINST 8027.3	Series Explosive Ordnance Disposal

1-305 COMNAVAIRLANT

COMNAVAIRLANTINST 8023.5	Series Conventional Aviation Ordnance Qualification and Certification Program

1-306 NAVSUP DIRECTIVES

NAVSUPINST 4440.115	Physical Inventory
NAVSUPINST 4600.70	Military Traffic Management Regulations
NAVSUPINST 4610.33	Reporting of Transportation Discrepancies in Shipment
NAVSUP PUB 437	MILSTRIP/MILSTRAP Operating Procedures Manual
NAVSUP PUB 505	Package and Handling of Dangerous Materials for Transportation by Military Aircraft-Preparation for Hazardous Material for Military Shipment